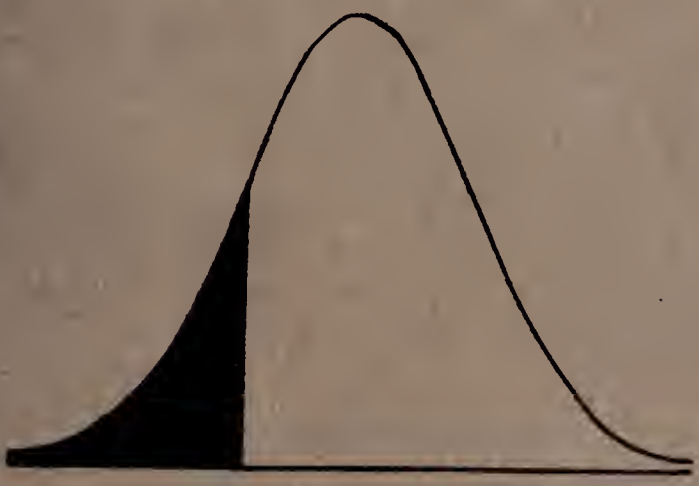
MEETING THE NEEDS
of the
MENTALLY RETARDED

BULLETIN No. 420

LESTER K. ADE
Superintendent of Public Instruction



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF PUBLIC INSTRUCTION
HARRISBURG, 1939

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(Continued inside back cover)

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A Part of an Extra-large Room Set Off for a Home Unit

EDUCATIONAL OBJECTIVES FOR THE MENTALLY RETARDED

The enrichment of each child's experiences and his adjustment to environmental conditions on the basis of his innate capacities and experiences.

The maximal development of the mental ability of each child.

The development of an adequate personality in each child through successfully achieved classroom activities.

The attainment of an optimal health status.

The recognition of the need for and the satisfying of recreational and avocational interests.

The acquisition of manual and verbal knowledge and skills looking toward partial or complete economic independence.

The development of moral habits culminating in social efficiency and worthy group membership.

The Pennsylvania Program of Education for the Mentally Retarded aims to capitalize each child's special abilities and to minimize his defects so that he may live happily and effectively.

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FOREWORD

Ever since the direct methods of learning practiced by our primitive ancestors, our educational processes have become increasingly involved. With greater numbers of children to be educated, came a wider range of capacities, interests, and needs. The teacher-pupil ratio progressed from that of one pupil per teacher to conditions ranging from twenty-five to 100 children per teacher. While teachers were somewhat more able to deal with the large numbers who were more or less like the average of the group, their problems with those children who were markedly above average or below average reached a stage where they had either to be ignored or to take most of their time.

"Fitting education to the child" orients Pennsylvania's program of Special Education. It aims to promote an appreciation of the fundamental principle that the public schools are organized and maintained for the benefit of the child, and to eradicate as rapidly as possible that uniformity of educational procedure that ignores, in a large measure, mental, physical, and personality differences in children.

Even where the regular grades of our schools are liberally supported and well organized, an excellent program of studies adopted, up-to-date textbooks and other equipment provided, teachers well qualified by professional preparation and experience, and supervision thorough and constructive, there will remain some pupils who, on account of some physical, mental, or personality handicap, cannot find in these schools a fair educational opportunity. Even in those districts where children in the regular grades are being classified according to ability for school work into three or more groups, and where there is some differentiation of the program of studies, including activities and units of study, there still remains a considerable number of these handicapped children to whom any suitable educational opportunity is denied. Their continued repetition of grade work due to their retardation is not only expensive but wasteful, and gives rise to aversion to school, truancy, and other problems.

Mentally handicapped children have definite limitations that interefere with their growing meaningfully and successfully in the regular grades in most of our schools today. For these, the educational picture has been simplified by the provision of special class facilities. Experience with such diversified teaching materials and methods of instruction has proved that there are activities of great educational value for such children which they can perform successfully. These activities are largely manual. When learning is motivated through and correlated with such activities, it takes on a practical application which stimulates greater effort on the part of the learner, is more readily acquired, more useful, and more enduring.

Classes for the mentally retarded have been in operation in Pennsylvania for forty-five years. They were among the first in the country. Many of those who labored faithfully and sympathetically to bring educational opportunity to pupils, who through no faults of their own were trailing their fellows and stigmatized as laggards, are still actively engaged in this work. They witnessed significant changes in the conceptions of mental defect. They witnessed the genesis of a practical psychology

applicable to specific educational problems, and the construction and refinement of tests for the identification of varying amounts and rates of mental growth. The cumulative experience in the intelligent use of the knowledge and means accruing from the development on the part of those endeavoring to provide a suitable and effective educational program for the mentally retarded pervades the contents of this bulletin. Their efforts are worthy of our acclaim.

In the last fifteen years the Department of Public Instruction has attempted to organize and correlate teaching procedures which would eventuate in a practical, purposive, integrated educational program for the mentally retarded. During this time the following sixteen school districts collaborated with the Division of Special Education in conducting regional conferences to demonstrate, after careful preparation, the coordination and integration of all classroom activities centered in a practical unit of study: Abington, Chambersburg, Erie, Harrisburg, Lancaster, Lansdale, Latrobe, Lebanon, Lewistown, Monaca, Northampton, Palmerton, Plymouth, Reading, Scranton, and West Chester. Out of these conferences has come much splendid evaluation of techniques and devices.

Classroom practices suggested in this bulletin are in a large measure the contribution of these conferences and the effective work which has been done by teachers of the mentally retarded throughout the Commonwealth. To the school authorities and teachers who have cooperated in this development sincere appreciation is acknowledged.

This bulletin was prepared by Dr. T. Ernest Newland, Chief, Division of Special Education, and Miss Edna M. Kugler, Adviser, Division of Special Education, under the direction of Dr. Paul L. Cressman, Director, Bureau of Instruction, and was edited by Mr. Eugene P. Bertin, Editor, Department of Public Instruction.

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Superintendent of Public Instruction

April, 1939

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Meeting the Needs of the Mentally Retarded

I. A PHILOSOPHY OF SPECIAL EDUCATION

A. DEMOCRACY IN EDUCATION

There has been considerable discussion as to what "democracy in education" really means. To some it has meant, and still means, that all are to have the same opportunity to profit from the same educational program. To those who held this point of view, the fact that a goodly number failed to profit from such a uniform offering has not been such a serious matter. The consciences of the advocates of this program have been comforted by the fact that the learners at least had a chance to avail themselves profitably of such an offering even if they did not, or could not, profit by such an opportunity.

Such a point of view could have fitted in well with the pioneer and frontier philosophy of rugged individualism. When people are living a rapacious type of life, it is easy to see how they perforce behave individualistically, and how the resulting attitude would influence their behavior in areas other than that of mere subsistence. Such a condition would result in the sloughing off of those who could not fend for themselves or those who could not contribute rather obviously to the welfare of the embryonic society.

A conception of democracy as equal opportunity for all, without regard for the individual's capacity to profit by the opportunity offered, inevitably results in a waste of human materials. This is particularly obvious in a complicated society that has passed the stage of physical pioneering, and is becoming noted for the increase in its service functions, such as the distribution and preparation of everyday commodities. As a population becomes physically more stable, it begins to look to the conservation of its human materials and to the efficiency of its different methods of dealing with them. Such a change in social life results in the development of a conception of democracy that tends increasingly to stress personal as well as group values. This second point of view holds that democracy is a social pattern wherein each individual is entitled to an opportunity to develop to the limit of his capacity. This interpretation is more tenable, because it is based not only on the psychological fact of individual differences in capacities to develop, but also on the socio-industrial fact of widely differing kinds of work to be done.

B. INDIVIDUAL DIFFERENCES

Modern psychology has contributed much to the identification of these differences in basic capacities—whether in the field of so-called academic intelligence, sensory discrimination, or motor coordination. The progress in this field has been so great that education has been unable to keep pace with the implications that have come out of this young but vitally important field.

Practical limitations have compelled us to treat lightly the fact that each child is unique. Whether we like it or not, we have to recognize that a mass education ideal carries with it the fact that children will be educated in groups, and all too often as groups. Fortunately, we are going through a period in which emphasis is being placed on the individual. In the main, however, only minor adjustments have been made for that occasional child who, for one reason or another, has attracted our attention, and who perhaps, has forced us into a protective type of activity. It is to be hoped that such modifications will become the rule rather than the suspected exception. It is also fortunate that we have been enabled by modern psychology to redefine our groups. Rather than to identify these groups on the basis of shape of head, or position of eyes, or height of forehead, we are able to characterize them in terms of more objective and defensible measurements. New techniques have been developed by which we are able to recognize latent abilities and aptitudes, to identify the several varying types of intelligence, and more effectively to select for special treatment those who would otherwise remain the unsolved problems of the school.

While the work that is being done in the areas of vocational aptitude, social maturity, and emotional adjustment is altogether creditable, the basic element in the intellectual processes of learning is that of mental capacity. It has always been recognized that people differ; but only in the last thirty years or so have we developed the skill to estimate these mental differences. There is no single measure, however, that may be accepted as a satisfactory guide in determining capacity for achievement. Specific disabilities prevent proficiency in the several elements involved in the educational procedure; character traits, personality, special aptitudes, skill, and abilities should also be considered.

Since we are better able than ever before to identify objectively varying degrees of mental capacity, and since we are becoming increasingly committed to the proposition that each member of society should be enabled to profit from educational opportunity to the limit of his capacities, it would seem quite reasonable for a state or a nation to make separate provision for the proper education of those who deviate markedly in either direction from the normal. Such is the purpose of "special education." This particular type of function contributes to an outcome that is doubly desirable; it increases the effectiveness of the work not only for the middle or average groups, but for the deviates as well.

C. CONTENT AND METHOD

In addition to this conception of the meaning of democracy in education, and a recognition of the implications of individual differences and their objective identification, a defensible philosophy should include in its scope some consideration of the content and method of special education. It is not necessary at this point to go into detail concerning the content that is appropriate to the field of special education. It is sufficient to say in general that the materials of learning should be adapted to the

child's capacities, abilities, interests, and his immediate and probable future needs. For the mentally slow child, there should be provided opportunity for participation in experiences adjusted to his intellectual and social level, a greater amount and a more meaningful kind of drill, and an extremely gradual increase in the difficulty of the work. His teachers should realize that his needs will be relatively restricted, and should give particular consideration to the problem of helping such a child to learn to take care of himself in the everyday world of non-handicapped individuals. As in all education, it should be realized that children's varying degrees of mastery of the tool subjects should be intended definitely for the purpose implied in the word "tool" as a means to an end. One does not learn to read merely for the purpose of being able to read; one learns to read in order to enjoy himself, or to find his way around or to protect himself.

It would be pleasant to conceive of a classroom as a place where there are no such things as conventional textbooks, and where it is not realized by the pupils or the teacher that there are any such separate activities as arithmetic, spelling, English, writing, and the like. The mere naming of them as separate ways of behaving tends to be dangerous. Such classification of behavior tends to give the impression that one writes without writing sentences, or works arithmetic without the benefit of spelling. The task of education is not to see that the children learn arithmetic or spelling or any particular subject, but rather to enable them to live more richly, with the school's cooperation, than they would if they were out in the streets, at the movies, or even in the home. Of course, these children may, in the process of living meaningfully in the school or on trips around town, learn to read; they may also learn something about numbers and to express themselves orally and in writing. It is the hope of society that they *will* develop some of these useful abilities; but the school is obligated both from a psychological and social point of view to place the major emphasis on their *living* rather than on their going through forms of activity that are all too often highly artificial and without meaning to the child.

Let us see what this amounts to more specifically. In one class a child who, in all probability would not mature mentally as an adult beyond a level of eight or nine years, works with futility at the job of multiplying a three-digit by a two-digit number. He does not get very far with this task because of his mental limitations, and hence is not ready for such artificial behavior. Added to this is the fact that he already has had six or seven years of practice in the techniques of failure and has acquired a basic attitude of failure. This child's situation is further complicated by the fact that he has not mastered the preliminary number concepts which are needed in the working of such an example, and also by the fact that on reaching maturity he will not in all probability encounter that type of artificial situation.

How much more meaningful such a child's life could be if he were to encounter a class situation evolving from his life in a social group where he could feel an actual need, such as using mail order catalogs to find the

price of traps or coats or wagons, or anything else that may be at his level of interest, to determine whether or not the class could afford to order equipment for themselves! How naturally he might encounter the situations involving reading, writing, computation, and spelling! How easily he could confront the opportunity to investigate the route the goods would have to travel, the location of certain towns he hears about, and the distances to places he knows!

Whether the school is adjusting its program to the intellectually superior or inferior child, the blind, the deaf, the crippled, or any other kind of child, its job is to furnish children the opportunity to live in an environment where they will be encouraged to develop a wide variety of meaningful experiences as a result of which they will be able to live more richly and more effectively after they leave school. The school has too long been a highly artificial place which children have honestly, and probably justifiably, disliked. *To the extent that the school situation departs from a natural, social, living situation, to that extent it will fail in its real purpose.* If this is true of the average child, it is true a hundred-fold in the case of the retarded child. This does not mean that we shall not have reading, writing, and arithmetic. We shall have them, and all the other necessary forms of behaving, but they will serve only as means to the end of more effective social adjustment, rather than as ends in themselves.

D. PERSONALITY ADJUSTMENT

Directly growing out of this concept is the matter of personality adjustments of special class children. The mental capacities of exceptional children often bring about frustrations and lack of adjustment to situations to such an extent that their emotional condition is frequently unbalanced or unstable. This must receive very thoughtful consideration. What is known about the development of mental health in normal children is equally applicable to exceptional children. It is particularly urgent that these principles be applied in the education of exceptional children because of their many personality problems.

Burnham in his book, "The Normal Mind," which has become a landmark in the field of mental hygiene, said that there are three essentials to mental health—a task, a plan, and freedom to perform the task in light of the plan. This statement has tremendously significant implications to those who are working with exceptional children. It follows that the task must be appropriate to the capacities and interests of the child, that different children may need varying amounts of help in formulating the plan to perform the task, and that provision must be made for varying amounts of freedom in carrying out the plan.

Another essential principle suggests that every child has the right to succeed. All children cannot expect to become a Horace Mann or an Abraham Lincoln or a Thomas Edison, but they have every right, from the standpoint of their own mental integrity, to succeed in some activity that is neither contemptuously simple nor discouragingly complex. This idea played no small part in the early formation of special classes, since

it seemed manifestly unfair to expect children who were handicapped in one way or another to compete with others not so unfortunate.

As a corollary to this principle, each child has a right to feel that he is a contributing member of a family or group. Whether his attitude is one of contributing services by cleaning the erasers, writing an original composition, or perpetrating some form of annoyance, must rest in the last analysis with the school. If most acts of crime and lawlessness are manifestations of a desire to obtain group recognition, the school must make provision for the development of opportunities for each individual to find means of satisfying this desire in socially acceptable ways.

Educators should be constantly aware of the fact that, so far as they are concerned, personality is influenced by education. Educators do not administer ductless gland extracts in order to affect the behavior of children. They do not give children greater or less basic intelligence. Neither do they give the children tall or short statures. But they do deal directly with the emotional behavior of children. After making due allowance for possible inherited tendencies, the particular ways in which emotional habits are expressed are in a large measure the result of what children learn either at home, or at school, or elsewhere. Like any other habits, they can be encouraged to continue or they can be changed. Children can be taught when and how to smile, or when and how to pout and frown. They can be taught at what to be angry or what to love. Much of this is done unintentionally, but it is done nevertheless.

A defensible philosophy of education, then, must provide for an adjustment to wide variations in the capacities and abilities of those for whom it must plan. These differences, the varying degrees of which are now much more objectively identifiable than was true heretofore, should not only necessitate both simplification and elaboration of content of education, but should also require a reconsideration of the methods of instruction to be used on the various types that deviate from the average of the group. They should likewise make us increasingly alert to the personality problems involved.

II. DISCOVERING THE MENTALLY RETARDED

The problem of locating the slow learners and determining whether or not they belong in a special class for the mentally retarded is obviously the first need. It should be pointed out immediately that a distinction should be made between those pupils who are educationally retarded because they have had faulty instruction or some emotional disturbance, or because of illness or transfers, and those pupils who are slow learners because they are not developing mentally as rapidly as do most children. It is definitely the latter group to which this bulletin pertains.

The first step to be taken in the location of candidates for classes for the mentally retarded is directly related to a fundamental first step which should be taken with respect to all the children in the school, *i. e.*, appropriate group intelligence tests should be given to all the pupils not only as a means of getting some indication as to which of them may be mentally retarded but also as a means of getting some idea as to the mental capacities of the rest of the children in order that the educational program may be more adequately adjusted to their capabilities. This should not be interpreted as meaning that such mental measurements can now be made without error. That is not possible and, in a strict sense, probably never will be possible. It is possible, however, to make such measurements with smaller error than was true heretofore. These points should be kept in mind in connection with this procedure:

1. This group testing of intelligence is only a "screening" method.
2. Some children will score lower than they really should, due to such things as their emotional condition, their physical condition, and other chance adverse conditions.
3. Few, if any, will score higher than they really should unless there have been some errors in the construction, administration, or scoring of the tests.
4. All children scoring low, or lower than may have been expected, should be examined individually by a properly qualified person. If any of these children are to be placed in any kind of a special class, it is required by the School Laws (Section 1413) that this individual examination be made by a person who is certificated by the Department of Public Instruction either as a public school psychological examiner or as a public school psychologist, or in a mental clinic approved by the State Council of Education. A complete individual psychological examination should be made, including a thorough physical examination and a case history of the child's family, individual, and school history.

The selection of the tests for the group testing should be made only after careful consideration has been given to the tests available. Quite often confusion in interpreting the results of intelligence tests occurs when one group test is used on a child when he enters school, another when he is in the third or fourth grade, and still another when he is in the junior or senior high school. Teachers and administrators are thereby caused to think that the intelligence quotient of a particular child is very

changeable when in reality the fluctuation may be due to the fact that different methods of standardization and different basic theories attended the development of the tests used. Some tests have been developed on the assumption that mental maturity is reached by the chronological age of eighteen, others at sixteen, and still others at fifteen. Some tests are known to yield higher intelligence quotients than others. The frequency with which this condition maintains indicates the desirability of the selection for the testing throughout all the grades of tests that have been standardized on comparable groups and on the same theoretical basis. It is, therefore, preferable that directly comparable group intelligence tests, or sets or tests, be used. If these tests then tend to yield results that are consistently higher or lower than those obtained on more thorough individual psychological examinations, proper allowances can be made. To attempt to locate mentally retarded pupils in any other manner is to run the very great risk of missing deserving pupils or of causing them to experience unnecessary failure.

Whether or not children just entering the first grade and scoring low enough on the intelligence tests should be placed directly in the special class depends greatly on the local administration and the facilities available in the schools. A number of administrators rightly prefer to give the child a trial of not more than a year in the first grade and then decide on his placement in the class for mentally retarded on the basis of both the teacher's judgment and the results obtained on the various tests. Certainly this should not be the practice beyond the first grade unless the pupil is a transfer from another system. In other cases, a non-reading curriculum accompanies a reading curriculum at the first grade level and a child who may seem to be a likely candidate for a class of mental retardates may be given a trial in the non-reading program. This would indicate pretty definitely that there is little, if any, excuse for a child to have failed several years, or to have been promoted annually into situations where he fails progressively before he is recognized as one who deserves the opportunity to succeed in a special class.

In terms of general probability, it is likely that some three per cent of the elementary school population should be provided with the opportunities of special class work for the mentally retarded. This percentage may be too high for certain localities, while still others will have as high as five to eight or ten per cent of their children needing this kind of program.

This emphasis upon the part to be played by the results of psychological tests is not to be taken to mean that they should provide the sole objective data to be considered in attempting to meet the needs of this type of child. While this kind of information is the most important single line of evidence, it must be augmented by evidence, objective if possible, concerning the child's auditory and visual acuity, his physiological condition, his social maturity, and his educational achievement. The proper location of children who deserve special class facilities for the mentally retarded is, then, but a part of the necessary testing of all the children in any particular system. More broadly speaking, the special education program is but a part of the whole guidance program of any school.

III. ESTABLISHING CLASSES FOR THE MENTALLY RETARDED

A. PREPARATORY STEPS

The establishment of one or more classes for the mentally retarded in a school system where there have been no such classes means that the children to be placed will need to be taken from several different grades or rooms, and that there will be a fairly heterogeneous group, the degree of heterogeneity depending upon the number of different special class levels that may be provided. In school systems where special classes are already in operation, the mentally retarded children can be put into these classes gradually at the lower chronological age levels. It can readily be seen that the placement in a special class for mentally retarded of a child who has been continued in the regular grades for a number of years can arouse a greater variety of problems than would the placement of a seven- or an eight-year-old who has been tried out in the first grade and properly has been found to belong in a class for the mentally retarded.

The establishment of any new special classes necessitates the proper preparation not only of the teaching and administrative personnel but also of the adults and of the children who may come into contact with the special class group. This is particularly true with respect to classes for the mentally retarded. In spite of the improving quality of the preparation prospective teachers are receiving, it is essential that the other teachers and the supervisors and administrators not directly connected with the special class work be shown how the special class logically fits into any educational program where educational efficiency is a matter of administrative concern. They should be helped to see that such a class really eases the regular teaching load by providing such special facilities as a specially prepared teacher, special equipment, and freedom from the conventional schedule in order that certain pupils who do not happen to be "book-learners" may have the chance to succeed, which they legitimately deserve. They should be helped to see that the mentally retarded child will accomplish things that are as important to him as the "book-learnings" of the average child may be to him. Quite definitely, they should be caused to realize that the special class is not merely a dumping ground for problem cases, that children should not be threatened with being "sentenced" to the special class, and that the special class is not operated primarily for the purpose of clarifying the educational air of the regular class room.

Meetings of parent-teacher groups and of school nurses are a definite help in preparing to set up a special class. A series of parent-teacher meetings on the general topic of individual differences can lead to a consideration of proper educational and social adjustment to the differing types of typical and atypical children. A fact-supported discussion of the tremendous range of physical and mental capabilities of school children is almost certain to cause the question to be raised—"What can be done to meet these widely divergent needs?" With such an approach, the pro-

vision of one or more special classes for the mentally retarded is seen to be only a part of a thoroughly common-sense educational adjustment. Meeting with the school nurses can do much to help lay a sound basis for the establishment of such special classes. The value of this type of preparation is apparent.

B. PLACEMENT IN SPECIAL CLASSES

Once the proper children are located and the proper attitudes on the part of the school staff are cultivated toward the class, the problem of placing the children in the special class arises. It is preferable, in most cases, that the children be placed in the special class at the beginning of the school year. This makes it possible for such children to be adequately tested and for proper arrangements to be made with his parents. Of a number of plans being used, it seems best for the initial contact with the parents to be made by the school nurse who, knowing the purpose of the special class and having a splendid entrée to the home by virtue of her having previously been of real help to the child and his parents, and never having punished or failed to promote the child, is most likely to be able to help the parents of the child recognize the values of the special class placement. This may be followed by a visit by the special class teacher or by a letter from the superintendent or supervising principal in which notification of the placement is tactfully made. Copies of letters used successfully by three superintendents are presented herewith. It may not be desirable for these letters to be used verbatim, but they can be adapted to the local situation.

My dear.....:

The School Board has made provision for the organization of special education classes. For several years the school system has not been able to meet the needs of all of the pupils who have had difficulty in learning the usual formal school work. A forward step has been taken in providing accommodations for all pupils who need special and individual help. It has been known for a long time that pupils learn in many different ways. Many pupils learn best through activities and all pupils learn better if they can carry on some activity at the time of learning.

From fifteen to eighteen pupils are assigned to a special education class under a specially prepared teacher, which is according to the State regulations. Many of the subjects taught in the special education classes will be the same as those taught in all the schools, but the methods are different and different tools are used. Pupils who do not get along in the regular school classes are always happier in the special education classes. They will learn by doing the things which cannot be done by pupils in a regular class room.

..... has been examined by a qualified psychologist and, according to the State Department of Public Instruction, is a pupil who should be assigned to a special class. The records show that ..... has had great difficulty in doing the regular school

work. We feel that ..... would be happier in one of the special classes where the work will be adapted to ..... needs and the result will be more satisfactory. We suggest that ..... report on the first day of school, which is September ...., to the..... school building. In case the distance is too far to walk, transportation in the form of bus tickets will be furnished free.

We will be glad to favor your child with admission to the special classes. We trust that ..... school year will be a most happy one.

Sincerely yours,

.....
Principal
of .....School
Approved: .....
Superintendent of Schools

Dear .....:

The ..... School District is about to take a forward step in providing accommodations leading to successful and happy school conditions for more of its pupils. A special education room is to be furnished for the pupils who learn by special means and who are not usually happy in regular school rooms.

It has been known for some time that pupils learn in many different ways. When we fail to permit the use of any certain way, we place an obstacle in the path of some pupils. Many pupils learn best through activity and all pupils learn better if they can carry on some activity at the time of learning. For those who learn best by activity the ..... School Board has decided to provide an activity room.

Only eighteen pupils will be privileged to attend this room, so it is necessary for us to examine the pupils very carefully to see who may be permitted to enter. In order that we may learn whether or not your child, ..., may be fortunate enough to become eligible for this class, we hope to examine ..... as to ..... ability to learn by this method.

The subjects taught in this school will be the same as those taught in all the schools, but the methods will be different and different tools will be used. Pupils who do not enjoy traditional school conditions are always happier in special education rooms. They will learn by doing the things they have always wanted to do. They will do things which cannot be done by pupils in any other room, and they will become the envy of many other pupils. You will be proud of the work done by pupils in this room.

We shall be glad to favor your child with admittance to this room if he qualifies in the examinations. We rely upon your approval and we know that you shall be proud to have your child participate in this progressive work. As other classes of this type are formed they will be modeled after the first one, which is now being organized.

Respectfully yours,
Signed ....

Dear .....:

About six years ago I recommended that the Board of Education authorize the organization of several special classes in our elementary schools. I had just completed plans for the setup when the depression came along and we had to abandon the project. At a recent meeting, the Board of Education authorized one such class at the ..... building during next school year.

The class will consist of not more than eighteen pupils. They will be taught by a specially prepared and experienced teacher. In addition to work in reading, language, arithmetic, etc., there will be work in arts and crafts. Arts and crafts include such things as woodwork, weaving, metal work, household arts, etc., depending upon the age (and the sex) of the pupil. Approximately one-third of each school day will be devoted to arts and crafts.

I am very much pleased that we are authorized to offer this kind of education. I feel certain that pupils who find the work of regular classes difficult and discouraging will find this pleasant and profitable. Our district is to be congratulated upon this forward step in education.

It will not be possible to accommodate all the pupils who will want to enroll in this class. Only a limited number can be accommodated. Moreover, only those who it is believed will profit most from this kind of school work will be invited to join the class. If you would like to have your ....., ..., assigned to this class, please sign the blank below, tear it off and send it to the ..... school with your child. Pupils will be enrolled in the order in which applications are received.

Yours truly,

....
Superintendent of Schools

.....

To the Superintendent of Schools:

This will certify that I wish my....., ..., to be assigned to the special class which you are planning to establish next school year.

.....
Parent

The child's social attachments in the regular grade should be recognized when it comes time to place him in a special class. Very often such placement means that the child has to form new friendships that may take some time, especially if his regular grade attachments were strong. Therefore, proper consideration of the child's social habits, his emotional and physiological development as well as his mental maturity will contribute much to the ease of his transfer to the special class.

After the special class is started the public should be provided opportunities to see what the children have accomplished. In some instances, sales are held; in others, minstrel shows, pageants, or plays. One plan initiated by a special teacher to acquaint the parents of her pupils and others in the community with the activities of the special class proved so successful that it is recommended to other teachers of the mentally retarded.

On the last Friday afternoon of each school month, the parents of the pupils are invited to come to the classroom. The pupils write the invitations, plan the program, and provide some simple refreshment. Sometimes a demonstration of handwork is given, or a dramatization of the unit of work the children are developing is staged, or the children read from their own compositions or work problems in arithmetic on the blackboards to show their accomplishments. These gatherings have greatly strengthened the position of the special class in the community. Objections have disappeared and in their place is a desire on the part of the regular pupils to participate in the activities of the special class.

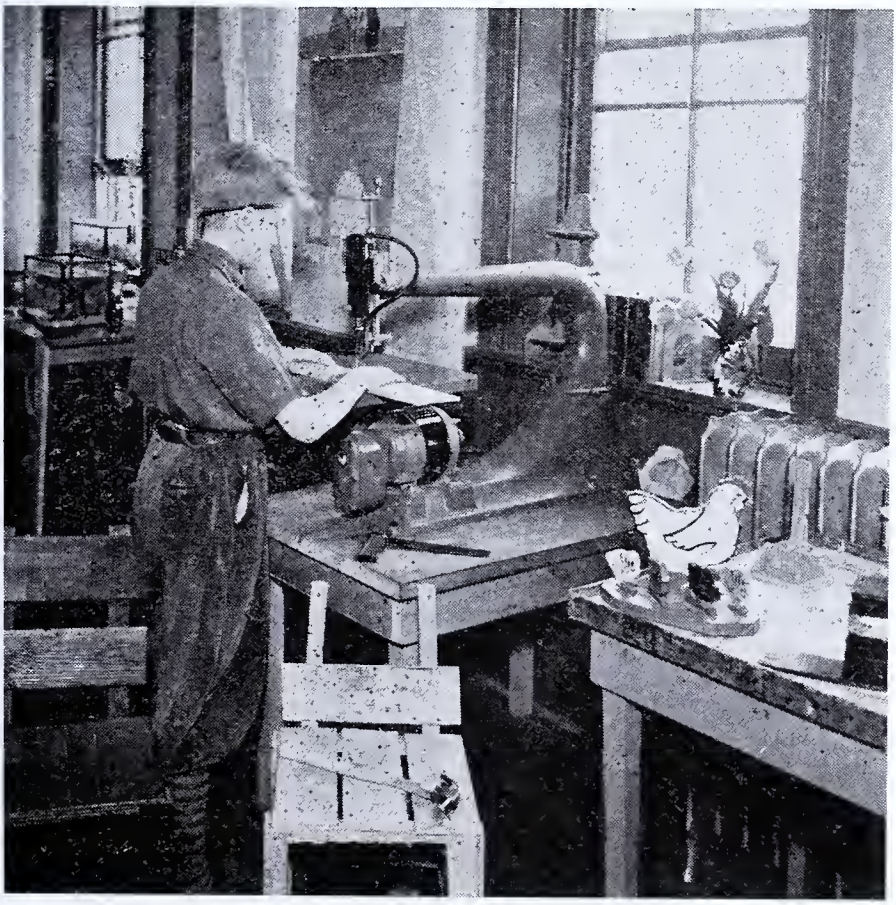
C. SELECTING THE SPECIAL CLASSROOM

In the smaller communities, the problem of room selection is confined to the task of finding one particular room that will serve the needs of the whole system. A room that would not be suitable for a regular class will not be suitable for a special class. Usually it is wise to give a somewhat less desirable room to a regular class and then make available the better room for the special class.

Well-lighted and Well-equipped Rooms Are Necessary

A number of supervisors and administrators find this to be a desirable practice, since, by so doing, it is possible to avoid attaching a stigma to a special class. Another argument for assigning the best available room to the special class is the fact that the special pupils will probably occupy this room for a number of years. The special class room should be an integral part of the school unit and should not be set apart from the regular program as though the children therein were in an isolation or contagious ward. The room selected should be of good size, preferably one and one-half units, or approximately twenty-two feet by forty-five feet. More specific information on the room will be found in the statement of standards for approval and in the Appendix.

The basic or minimum equipment for the room should be provided according to the list shown on page 132. Occasionally a superintendent causes undue delay in starting a class by refraining from ordering the necessary equipment until the teacher has arrived to take charge of the class. Such a delay is not necessary, since the minimal equipment recommended by the Department of Public Instruction can be ordered and placed in the room before the teacher is even selected, leaving the



Good Equipment Can Challenge Unexpected Capacities

ordering of most of the supplies until the arrival of the teacher. The suggested minimal supplies should be ordered in advance and be on hand when the class is opened. The program of teacher preparation for this work is sufficiently uniform and the basic needs of the children are predictable enough that very little concern need be felt about the possibility of selecting, from the recommended lists, equipment, and supplies that would be of no, or decidedly limited, value.

In the larger school districts where several special classes for the mentally retarded are to be established, the best practice is likely to be the provision of such classes scattered throughout the system for the younger children and the establishment of one or more centers for the older mentally retarded pupils. Such an arrangement makes possible some departmentalization of the work for the older pupils, if that is desired.

The establishment of such centers has at least these possible advantages:

1. Opportunity for the classification of pupils according to age, sex, and ability.
2. Economy in the amount and use of equipment.
3. Opportunity for partial departmentalization at the higher levels: Health and physical education, industrial arts, manual arts, and household arts.
4. Specialization on the part of teachers in these areas and an opportunity to select and assign teachers to positions for which they have a natural aptitude as well as specialized preparation.
5. An opportunity for greater stimulation and cooperation on the part of both teachers and pupils.
6. An opportunity for the pupil to progress from one group or section to the next higher rather than continuing as customary in the one room until the expiration of the period of compulsory attendance.
7. An opportunty for the pupils to come under the instruction of several teachers rather than to remain with the same teacher for several years in succession.

D. LEVELS OF SPECIAL CLASSES FOR THE MENTALLY RETARDED

Directly related to this suggestion is the recommendation that there be established different levels of special classes for these children. These may be termed the "elementary," "intermediate," and "secondary" levels, if three levels are possible, or may be called the "elementary" or "secondary" if only two levels are possible. Under the former arrangement, the "elementary" level would be for those in the chronological age group of seven to ten or eleven years; the "intermediate" group, for those ten or eleven to fourteen years of age; and the "secondary" level for those from fourteen years of age up. According to the latter arrangement, the lower level could be made to care for those from seven to twelve or thirteen years of age, and the upper level for the remainder. It would be reasonable to expect both arrangements to function in a large school

system where the distribution of available school buildings and pupil population warranted such a plan.

The provision of levels such as these will make it possible to promote mentally retarded children from one level to another and will also make it possible to arrange the work of these special classes in an increasing order of difficulty. No small amount of reaction against the establishment of special classes for the mentally retarded can be avoided by providing for the possibility of promotion to a higher level in order that the classes will not be thought of as "dead ends." It is quite possible that the work at the secondary level can be departmentalized better than at the lower levels.

E. SUPERVISION OF THE CLASSES

In many school districts the instruction in the special classes for the mentally retarded is supervised by the regular elementary supervisor or by the supervising principal. This arrangement, if necessary, can be effective only if the person having this responsibility recognizes these points:

1. The special class is specifically intended to provide the opportunity to succeed for those children to whom the conventional program is not suited. The special class is not a "dumping ground."
2. Children should be placed in the special class only after competent and adequate study of their needs and capacities. This involves thorough psychological, medical, social, and educational examination.
3. The supervisor, the teacher, and the parents should cooperate in the child's placement in the special class.
4. The program of the special class should be characterized by greater flexibility and greater individualization than is true in any of the regular grades.
5. The program of the special class should be dominated by learning experiences in health and manual activities rather than the conventional "three R's," although the latter are a legitimate part of the program.

In some of the larger school districts, the work of the special classes may be supervised by a person who is qualified not only for this work, but also for the individual psychological examining of children who may need guidance which may or may not include placement in special classes. In our two first class districts, of course, full-time persons are in charge of the supervision of the special classes.

Whether or not the art and music work of the special classes should be under the supervision of special supervisors depends upon the educational philosophy and methods of those supervisors. If the music supervisor is one who delights in having his charges sing scales, identify different kinds of rests and notes, and abhors popular and semi-classical music, it will be better for him to direct his energies outside the special classes. If, on the other hand, the music supervisor is one who can really make music

function in the lives of the mentally retarded children, his or her services will be a real asset to the special class program. Lessons in art will be ineffective to a large degree if the instructor requires a uniform performance of each child in the special class. Due to the wide range of ability and interests, the lesson is apt to be far too difficult for some and a bore to others.

F. TRANSPORTATION OF EXCEPTIONAL CHILDREN[1]

Section 1413 of the School Laws of Pennsylvania contains this provision:

> "Any physically or mentally handicapped child, who is regularly enrolled in a special class that is approved by the Department of Public Instruction, may be furnished with free transportation by the school district. The Commonwealth shall reimburse any school district furnishing such transportation, in the same manner and amounts as provided for in this act for the transportation of pupils from closed schools.
>
> "When it is not feasible to provide such transportation, the board of school directors may, in lieu thereof, pay for suitable board and lodging for any such child: Provided, That in no case shall the State's share of the cost exceed one ($1.00) dollar per day per pupil for the actual number of days such pupil is in attendance at school, not exceeding five days in any one week."

This makes it possible for any mentally retarded pupil who is eligible for special class placement, and who can not be provided for otherwise, to be sent to a district where approved special class facilities are provided for mentally retarded children, assuming that there is room in such a district. Thus it is also possible for a large school district to provide transportation facilities within the district for those special class children needing such accommodation. It will be noted that no minimal distance is stated. It will be seen, also, that the provision of such transportation, or board and room, by the district is permissive rather than mandatory. Once such a provision is made for any exceptional child or children, it is mandatory that the State reimburse the local district, after proper application and approval of the transportation facilities provided, in the manner and amounts specified. The table for the rate of such reimbursement, effective July 1, 1939, follows.

True Valuation Per Teacher	Rate of Reimbursement
$25,000 or less	90%
More than $25,000 but less than $50,000	80%
More than $50,000 but less than $75,000	75%
More than $75,000 but less than $100,000	70%
More than $100,000 but less than $150,000	65%
More than $150,000 but less than $200,000	60%
More than $200,000 but less than $250,000	55%
More than $250,000	50%

[1] At the time this goes to press, the General Assembly is contemplating postponing the effective date of this provision. Write the Bureau of Administration and Finance, Department of Public Instruction, concerning the status of this clause.

There are certain maxima set for the different classes of school districts and also definite requirements as to the contracting for such transportation. Complete information regarding these matters can be obtained from the Bureau of Administration and Finance, of the Department of Public Instruction.

When a special class child is sent to an approved special class in another district, the district sending the child is obligated to pay to the district receiving him tuition which has been computed in the manner prescribed by the School Laws of Pennsylvania. It should be pointed out that the rate of this tuition is determined in light of the general program at the elementary or secondary level, as the case may be, rather than in terms of the tuition cost in the special class. The reason for this is that, while the special class per capita tuition cost is higher than that of the regular program, the district receiving the special class child is being given an additional reimbursement by the State to help care for this difference.

IV. STANDARDS FOR SPECIAL CLASSES FOR THE MENTALLY RETARDED

In a young country, provision of special educational facilities for the deviates of its public school population is very slow to develop. Particularly is this true when the constituency of that country has originated where education has been intended for the classes rather than for the masses. Such was the situation during the early days of our country. When children were found who needed special education, they were either prevented from entering upon the regular education program, or were removed from it upon discovery. They were then either returned to the home for whatever education they might obtain there, or later, were provided for by some separate agency. This general practice was at first a private humanitarian undertaking; later it became a sporadic undertaking by a few laboratories, and still later by some public schools.

Recognition of the doctrine of individual differences in mental ability, and the inadequacy of the traditional course of study to meet and supply the needs of retardates in the public schools, actuated far-sighted pioneers to organize special classes for these pupils in widely separated school districts—in Philadelphia in 1895, in New York in 1895, and in Providence in 1896.

Organization of these classes was an educational venture. Naturally, the teachers in charge were inadequately prepared and the educational procedure differed very little from that of the regular grades, except that subject matter was administered in small units to smaller groups with greater emphasis upon repetition and drill. The results of this procedure were not gratifying.

Successful application of the psychological principles of Seguin's physiological method, in training mental defectives in institutions, came as the first marked departure in the development of a suitable and satisfactory educational procedure for the mentally handicapped. Subject matter became more concrete and handwork was introduced. The special class teachers of Boston in 1917 published a handbook of activities that could be pursued successfully in training the mentally defective. This treatise was used extensively by teachers of the mentally retarded and undoubtedly had a stimulating effect and improved teaching method.

Probably this change in educational procedure and the absence of clearly defined objectives isolated the special class. It became a catch-all for the various kinds of educational misfits, thus promoting the interests of the pupils in the grades and ignoring the educational needs of those for whom these classes originally had been established. Recognition of the validity of the educational claim of all types of educable handicapped children on a par with the non-handicapped demanded the definition of educational objectives and the formulation of standards for their consummation.

Section 1413 of the School Laws specifies that adequate educational facilities shall be provided for "every child . . ., between the ages of eight and eighteen, who is gravely retarded in his or her school work, or any

child between the ages of six and eighteen, who, because of apparent exceptional physical or mental condition, is not being properly educated and trained."

Standards for the organization and administration of special classes were approved by the State Council of Education at a regular meeting on October 1, 1926, for the different types of special classes and special schools as to:

Location of class
Constitution of class
Size of class
Conditions of admission and discharge of pupils
Equipment
Course of study
Methods of instruction
Qualifications of teachers

A. STANDARD 1. LOCATION OF CLASS

"Buildings or classrooms in buildings used for mentally retarded classes shall comply with the requirements of Article VI of the School Laws."

In selecting a classroom for the mentally retarded, consideration should be given to the following items:

1. Sufficient light area—equal to twenty per cent of the floor space.
2. Sufficient air space—thirty cubic feet per pupil.
3. Adequate heat and ventilation.
4. Sufficient floor space for classroom desks of the movable type, or for small individual tables and chairs, for the maximum enrolment, and for such other equipment as is necessary to carry on legitimate activities for the mentally retarded. Preferably, a one and one-half unit room (roughly twenty-two by forty-five feet) should be used for such single classes. When two or more special classes are centralized with a division of instruction, the several rooms need not be as large as when one classroom accommodates all activities.
5. A location which offers the least disturbance to the regular grades incident to the noise of the manual and physical activities of the special class, but one which is definitely an integral part of the regular school program rather than one that may be thought by the special class pupils or their parents to be less desirable than the regular classrooms.
6. Adequate blackboard and ample bulletin board space.
7. Sufficient storage and display space for handicraft materials, finished and unfinished articles, and general classroom supplies.
8. Running water (preferably hot and cold) with a deep sink conveniently located.
9. Electrical outlets for electric iron, electric hot plate, electric fret saw, and other electrical appliances.
10. A room having possibilities for attractive decoration.

New and reconstructed rooms to be used for this type of special class must, of course, be approved by the Division of School Plant of the Department of Public Instruction. The Division of Special Education is ready to cooperate in the planning and selection of rooms for special classes.

Care should be exercised not to so isolate mentally retarded children that they acquire the feeling of being an excluded or ostracized part of the school organization. This suggestion does not apply to centers occupying an entire building, but even in such instances opportunities should be sought to lessen any feeling of being different from the children of the regular grades.

The school environment of mentally retarded children as well as of other children in the public schools should be the best the school district can afford. All surroundings should be conducive to good health and contentment. For the development of physical tone, which is apt to be below par, it is essential that there should be, in addition to the above specifications, sufficient play area, both indoors and out. The pupils enrolled in classes for the mentally retarded usually occupy the same room for several years; hence the selection of a desirable classroom for them is of paramount importance.

B. STANDARD 2. CONSTITUTION OF CLASS

"Classes for the mentally retarded shall contain only the mentally defective who are educable in groups of the size constituting these classes, and who are educable according to standards approved by the State Council of Education."

At the present time, if any single criterion of the educability of a child were to be used, it would probably be one indicating the mental capacity of the child. Either his intelligence quotient, indicating the rate at which he is developing mentally, or his mental age, showing how much, or to what level, he has grown mentally, could be used. Roughly, it may be said that the classes for mentally retarded children are intended for children whose intelligence quotients fall between fifty and eighty or eighty-five, as determined on one or more appropriate individual mental examinations by a person who is certificated by the Department of Public Instruction either as a public school psychological examiner or as a public school psychologist, or in a mental clinic that is approved by the Department of Public Instruction. This range of rates of mental growth varies somewhat with the level at which the special class is located. For instance, special classes for mentally retarded children at the elementary level should be provided for those whose intelligence quotients range from fifty to seventy-five or eighty, while those at the secondary level should be confined to children of secondary level age whose intelligence quotients range, roughly, from seventy to as high as eighty-five.

To the extent that these standards can be augmented by evidence of the social competency and the physical adequacy of these children, to that extent will the basis for admittance to or exclusion from this type of class be enhanced.

When the school population is classified into homogeneous groups, the mentally backward are frequently placed in slow sections of the regular grades with a modification of the regular course of study. Such classification and modification do not offer these pupils a satisfactory educational opportunity. The subject matter of the regular curriculum and the method of presentation do not engage their interest, and results are usually inferior and unsatisfactory. They profit more from instruction that is largely manual in character and by the motivation of "academic" subjects through manual activities and other concrete experiences.

It is quite likely that at least three per cent of the elementary public school group should be provided with special class facilities. It can readily be seen that in a very few communities the percentage will be smaller, while in many others it may run from five to as high as eight or ten per cent.

The presence of pupils who are mentally normal, but pedagogically retarded through illness, frequent transfers, or other causes resulting in educational maladjustment, in a class for the mentally retarded presents a teaching situation that cannot be administered with fairness. Either one group or the other will be neglected. The pedagogically retarded pupil requires intensive instruction in grade subjects looking toward restoration to the grade appropriate to his chronological age at the earliest possible moment, while the mentally retarded pupil requires an educational program featuring manual activities. The problem of pedagogical retardation may be solved either through the organization of coaching classes or the employment of remedial teachers.

Disciplinary or behavior problems of normal mentality or better are obviously out of place in a class for mentally retarded children. To threaten a troublesome child with assignment to such a class, regardless of his mental status, indicates a complete misconception of the aims and objectives of this type of class. It is true that many mentally retarded children present disciplinary problems in addition to educational maladjustment. Usually in such cases if the educational problem is solved early, the behavior problem disappears.

All too frequently, troublesome children are assigned to classes for the mentally retarded without regard to their innate mental capacities, while the mentally defective and mentally backward who are conformed in behavior are promoted "on age" from grade to grade until released by the expiration of the period of compulsory attendance. The over-age mentally defective and mentally backward who do fairly acceptable work in the grades after much repetition and drill are seldom assigned to a class for the mentally retarded and, when they are, the purpose, unfortunately, frequently is to restore them to the regular grades as soon as possible regardless of their chronological fitness and without regard for their best educational interests. An appreciation of their actual life-needs, insofar as this is possible, should convince educational administrators that a program of study adapted to these needs will be far more beneficial than an increasingly difficult "bookish" program fraught with discouragement through lack of ability to comprehend and apply the information they are expected to have acquired.

C. STANDARD 3. SIZE OF CLASS

The maximum enrolment of classes for the mentally retarded has been fixed by the State Council of Education at eighteen for classes at the elementary level and at twenty-five for classes for the mentally retarded at the secondary level.

The lack of neuro-muscular coordination of children under nine or ten, its development during the pre-pubescent period, the peculiar awkwardness at the onset of adolescence, the variations in interests at these three levels, as well as differences in mental abilities within these particular groups, set up a very difficult teaching situation, and indicate the need for groupings at the elementary and secondary levels that are as homogeneous as possible. Due to these characteristics peculiar to children at different age levels, a too wide distribution of ages in one class is not desirable. To effect homogeneous grouping and provide sufficient and suitable facilities for mentally handicapped children, two, three, and five class units or centers are advocated for the larger school districts.

D. STANDARD 4. CONDITIONS OF ADMISSION AND DISCHARGE OF PUPILS

Section 1413, paragraph one, of the School Laws provides that "it shall be the duty of the secretary of the school board, teachers, school enumerators, and attendance officers, in every school district in this Commonwealth, in accordance with the rules of procedure prescribed by the Superintendent of Public Instruction, to secure information and report to the district or county superintendent of schools, on or before the fifteenth day of October of each year, and thereafter as cases arise, every child within said district, between the ages of eight (8) and eighteen (18)[1] years, who is gravely retarded in his or her school work, or any child between the ages of six (6) and eighteen (18)[1] who, because of apparent exceptional physical or mental condition, is not being properly educated and trained, and as soon thereafter as possible the child shall be examined by a mental clinic approved by the State Council of Education, or by a person certified by the Department of Public Instruction as a public school psychologist or psychological examiner, and a report shall be made concerning his fitness for special education[2]. In school districts of the first, second, and third class, having a district superintendent of schools, said report shall be made to the superintendent of the district. In all other districts, the report shall be made to the superintendent of schools of the county."

The proper selection and classification of pupils, based on a thorough psychological examination, are essential to the success of a class for the mentally retarded. The policy of waiting until a child is "gravely retarded" (two or more years) with the sense of failure strongly ingrained before assigning him to a special class should be avoided. The process

[1] At the time this goes to press, it is not certain whether the present General Assembly will change this upper age limit.

[2] A list of these approved clinics appears periodically in the departmental monthly publication *Public Education*. A file of persons so certified by the Department of Public Instruction is kept in the office of the Division of Special Education. Certification requirements for public school psychological examiner and public school psychologist, effective June 17, 1937, will be found in the Appendix.

of selection should begin when pupils enter the kindergarten or first grade. Through this procedure, repetition of grades, with the concomitant acquisition of undesirable habits and attitudes, such as discouragement, embarrassment, resentment, inattention, idleness, truancy, and delinquency, will be minimized. Early selection and assignment of pupils to any special class will afford, also, the maximum amount of time for the development of desirable habits. The limited school careers of these pupils demand the best possible use of their school time. Very little benefit will accrue to the child who is assigned to a class for the mentally retarded after he is fourteen or fifteen years of age and after he has acquired a definite dislike for school. Such an assignment places upon the special class teacher a difficult task of transforming undesirable mental attitudes and robs a younger pupil of a real educational opportunity. It also places on the superintendent or the supervisor the stigma of having failed to meet properly the educational needs of his children.

If a child fails to respond normally on entering school, or at any time shows signs of impaired ability with its consequent retardation, he should be referred promptly for a psychological examination by a qualified person. If he is found to be sufficiently retarded mentally to be entitled to the privileges of a special class, he should be placed in such a class in the district, or in a class maintained jointly with another district, or his teacher should be allowed to make appropriate, even though radical, adjustments in the child's educational program. No child should be placed in a special class on the basis of a teacher's or supervisor's recommendation unless the recommendation is based in part at least upon a knowledge of the results of an adequate individual psychological examination.

Due to the fact that some mentally subnormal children occasionally attain third or fourth grade proficiency in "academic" subjects as the result of individual, diagnostic teaching in classes for the mentally retarded, there may be a dangerous tendency to return them to regular grades with little regard for their chronological and physical fitness. If they are over-age for the grade to which they are turned, they soon find themselves socially maladjusted and, in a larger group with less individual attention, they quickly become educational misfits. Once a child is placed in a special class for mentally retarded, he should not be returned to a regular class unless a mistaken diagnosis has been made at the time of his initial placement there.

Pupils may be discharged from a class for the mentally retarded before the end of the compulsory attendance period under the following conditions:

1. Exclusion

When an approved mental clinic or a certified psychologist reports a child as being so mentally defective that he cannot profit from the instruction given in a special class for mentally retarded pupils. The State Council of Education approved the following characterization of such uneducable children (Section 1413 of the School Laws):

"The standards to be used by the school psychologist, psychological examiner, or mental clinic in finding a child uneducable, and by the Division of Special Education in approving a report of a child, shall be as follows:

a. The child must have an intelligence quotient of less than fifty as obtained on an individual examination, or
b. The child must have an intelligence quotient between fifty and sixty-nine and must have shown in an approved special class his inability to learn to support himself in a favorable environment, or
c. The child must have an intelligence quotient of less than seventy-five, and must have shown behavior symptomatic of his permanent inability to learn to maintain himself, without supervision, in a favorable environment."

The State Council approved the following procedure to be used in such cases:

"Before a board of school directors is relieved of the obligation of providing education for a child who is uneducable in the public schools, and before such child is permanently exempt from the provisions of the compulsory school attendance laws, the following procedures must have been completed:

a. A certified public school psychologist, or psychological examiner, or an approved mental clinic must certify that the child is uneducable in the public schools.
b. The board of school directors of the district in which the child is a resident must authorize the reporting of the child to the Department of Welfare.
c. The secretary of the school board must report the child on a form approved by the State Council of Education and furnished by the Department of Public Instruction.
d. The report of the secretary of the board of school directors must be approved by the Chief of the Division of Special Education, representing the Department of Public Instruction, before it is transmitted to the Department of Welfare.
e. After the report has been approved and transmitted to the Department of Welfare, a notification of such approval and transmittal shall be sent by the chief of the Division of Special Education on a form approved by the State Council of Education to the board of school directors. Such notification shall relieve the board of school directors of the obligation of providing education for the child."

One copy of the forms, which are in triplicate, is reproduced in the Appendix.

In cases where there is also an anti-social attitude on the part of the child to be excluded, the school officials owe it to society—even if there is no such specific requirement laid down by the Department—to see that when the total responsibility for such a child is restored to the home, some

cooperating social agency such as the juvenile court, the county nurse, some children's aid society, or the like, maintains periodic contacts with the child to help prevent or anticipate socially dangerous behavior. This is especially necessary since our State institutions for the feebleminded are already crowded.

2. Excusal

When a child ". . . has been examined by an approved mental clinic or by a person certified as a public school psychologist or psychological examiner, and has been found to be unable to profit from further school attendance, and who has been reported to the board of school directors and excused, in accordance with regulations prescribed by the State Council of Education." (Section 1416 of the School Laws). In this connection, the State Council of Education approved the following definition of a child who is "unable to profit from further school attendance."

> "A child chronologically sixteen or more years of age with a mental age of less than ten years, on at least one appropriate individual mental test or examination at the time he was sixteen or more years of age shall be considered as being 'unable to profit from further school attendance.' A chronological age of sixteen shall mean sixteen years and no months. A mental age of ten shall mean ten years and no months."

The following procedure for such excusal is approved by the State Council of Education:

a. Unless otherwise provided, this procedure shall be followed before a child sixteen or more years of age may be excused from public school attendance:

   (1) He shall have been examined individually and found to have a mental age of less than ten years on or subsequent to his sixteenth birthday in a mental clinic that is approved by the State Council of Education, or by a person who is certificated by the Department of Public Instruction as a psychological examiner or as a public school psychologist.

   (2) On a form approved by the State Council of Education a report of such findings, with other relevant data, and an affirmation signed by an official representative of the clinic or by the examining person, to the effect that the child may properly be excused from further school attendance on account of mental incapacity, shall be presented to the school board.

   (3) Upon authorization by the board of school directors the secretary shall send the application for excusal to the Chief of the Division of Special Education who will either forward it to the Chief of the Division of Child Accounting and Research for final approval or reject it.

(4) The child will be officially excused when the superintendent or other responsible officer of the district, county, or township, receives the application blank duly approved by the Chief of the Division of Child Accounting and Research.

b. On presentation to the Division of Child Accounting and Research and to the Division of Special Education of evidence that an adequate procedure is being followed in excusing public school pupils on the basis of the State Council of Education definition of mental grounds of excusability, school districts of the first class shall, and school districts of the second class may, on permission from the Chief of the Division of Child Accounting and Research, make on or before July 15, annual reports or acts of excusal, giving such data as the Chief of the Division of Child Accounting and Research may request on a form provided for that purpose.

Forms to be used by school districts in accordance with the provisions of this procedure may be obtained from the Division of Child Accounting and Research in the Department of Public Instruction. Reproductions of them will be found in the Appendix.

3. Non-Deaf Mute

When a child, having normal hearing, is a mentally defective mute. (Hearing mutes of over five years of age shall be presumed to be mentally defective unless evidence to the contrary is approved by the Department of Public Instruction.)

4. Physical Conditions

When the medical inspector recommends his exclusion from the public schools on grounds of physical incapacity to continue in or to profit from further special class education. Such a report or recommendation is made on Health Department Form 98 which is submitted to the Division of School Medical Inspection.

If a school board should deem it expedient to make provision for low grade feebleminded children of compulsory school age, it should be borne in mind that such children should be placed in charge of a solicitous person and supplied with ample play material. Such a group should *not* be designated as a special class nor be considered a part of the public school system.

E. STANDARD 5. EQUIPMENT

"Classes for the mentally retarded shall be equipped with tools and materials for appropriate forms of handwork, such as carpet and rug weaving, woodworking, sewing, cooking, and other manual activities of educational value."

These specific activities are suggestive, not mandatory. Additional activities of educational value are always in order. No activity should

be started that cannot be financially justified or continued if it can be supplanted by a less expensive or more appropriate activity of equal educational value.

A statement of minimal equipment for a single class; a supplementary statement of general classroom supplies; of suggested additional classroom equipment and supplies, not essential but desirable; and of suggested additional tools and materials for handicrafts will be found in the Appendix to this bulletin. The supplementary list is offered as suggestive to teachers who wish to develop equipment beyond the prescribed minimum.

F. STANDARD 6. COURSE OF STUDY

> "Courses of study in the types of special classes above enumerated (mentally retarded et al.) shall be subject to the inspection and supervision of the Department of Public Instruction and approved by it."

Due to the diversity of interests, of abilities, and of the physiological development of pupils usually found in single unit classes for the mentally retarded, the course or program of study can be outlined in a general way only and must necessarily lack detail. It is limited only by what the pupils can learn, how they learn, and what for them is worthwhile learning. It aims to familiarize the pupils with their environment and to enable them to adjust themselves on the basis of innate capacities to environmental conditions. Therefore, any activity or situation that stimulates pupils and facilitates the attainment of these objectives has educational value and may be made a part of the program of studies. In the administration of such a program, there must be freedom from the formal curriculum of the regular grades, as well as freedom from definite and specific allotments of subject material to be covered in a given length of time.

1. Course of Study Should be Adapted to Capacities, Achievements, and Needs

On assuming charge of a special class, the teacher should first of all learn the mental capacities of his or her students. While it is of value to know the intelligence quotients of the pupils in order to have some idea as to the likely rate of their mental growth, it is much more essential that the children be thought of in terms of their mental ages at the time he or she is working with them. A teacher is in a much better position to help a child select reading materials or to provide him with appropriate drill materials, when the occasion for such work presents itself, if he or she knows that the child has attained a mental level of seven years and six months than if it is known that the child has an intelligence quotient of seventy-two. On the basis of the mental age, it is easily understood that the child has developed mentally about as much as an average second grade pupil, while an intelligence quotient of seventy-two may mean

that a pupil has not yet reached the mental maturity of a first grader or may have attained the mental level of an average fourth grade child. Since most of the information available to the teacher is likely to be that which was obtained some time previously, it is very necessary that the teacher recompute each year or half year, the mental level of the pupils in the class. The process is very simple and perfectly straightforward. Merely take the actual, or chronological age of the pupil, preferably in months, multiply it by the intelligence quotient, and mark off two decimal places from the right. Take the case of a girl who is chronologically ten years and eight months old, and who had an intelligence quotient of seventy-four when she was tested individually and placed in the special class two years previously. Assuming that the intelligence quotient of seventy-four is stable or constant—and most of them are likely to be reasonably constant if the testing has been competently done, and if no unusual changes have taken place in the child's physiological condition, it will be seen that she is developing mentally at about three-fourths of the rate at which she is increasing in age chronologically. At the present time, then, (C.A. ten-eight, or 128 months) her mental age would be ninety-four and seventy-two one hundredths months, or ninety-five months. She would, therefore, have a mental age of about seven years, eleven months, and might be expected to be able to succeed on second or third grade material. It is obviously absurd for a special class teacher, or any other teacher as far as that is concerned, to be expected to adapt learning experiences and materials to any child without having at hand correct information as to the mental capacities of his children.

It is also necessary for the teacher to determine the achievement of the pupils assigned to him or her in the subject matter of the regular grades, their physical handicaps, if any, and their abilities to handle tools and materials. Former school records and specimens of school work, if available, as well as the summary sheet of the psychological examination, will supply part of this information. In addition, exploration in the classroom will be necessary. In this exploration, it is preferable that the teacher should err in assigning tasks that are too easy, rather than too difficult, so as to avoid a repetition of the discouragement through failure which the children probably have experienced previously. A visit to the home of each pupil early in the school year and shortly after the assignment of new pupils during the year will augment the teacher's knowledge of her pupils and enable her to plan the program of study more intelligently.

Having determined the pupil's present capacity, as well as their physical and manumental achievement, the next step is to consider their present and future needs and to think through the program of study accordingly. In view of their limitations, together with the futility of teaching subject matter that is of little or no use, and in consideration of the facts that the mentally retarded tend to approximate more nearly the ability of normal pupils in manual dexterity and physical energy and enjoy tasks within the scope of their abilities, the program of study for them should be

approached from a manual activity point of view. To further maximal economic and social independence, the development of useful forms of manual and industrial skills should be emphasized as well as the development of adequate habits of "moral and social" response. Such training, whether at the elementary or secondary level, is not vocational but rather pre-vocational in that it gives definite training in habits, attitudes, and characteristics that can lead to more desirable workmanship and social proficiency.

The educational needs of the mentally retarded are not met through "minimal essentials," taught more intensively and at a slower rate. Even though, with much repetition and drill, they can be taught long division, problems in addition, subtraction, multiplication, some division of fractions, and certain other mechanical arithmetical operations of even greater difficulty, the accomplishment will be a trick performance with little understanding or chance for practical application. On the other hand, the fundamentals of the tool subjects must be learned to a limited degree for practical purposes. The approach, however, is entirely different from the traditional, conventional type of "lesson-learning" as contrasted with an integrated, meaningful activity program.

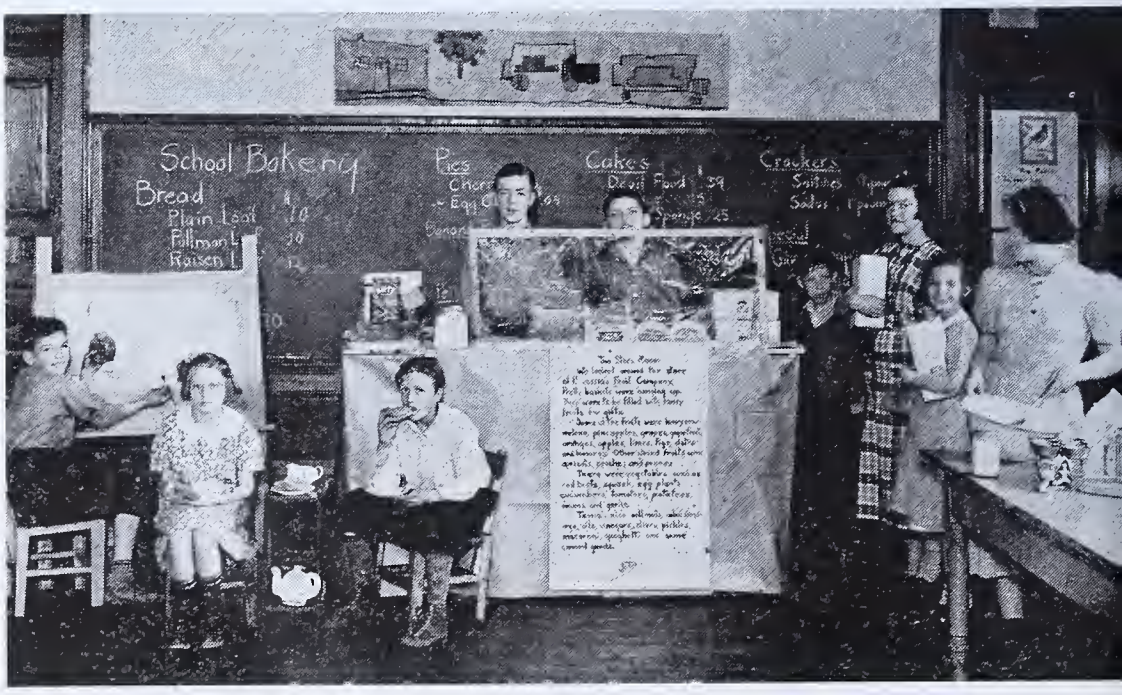
The most important intellectual need of the mentally retarded is the development of the ability to give intelligent and accurate oral expression to experiences and desires. They should be able, before they leave school, to write simple and legible letters and simple statements; to tell time, to read and interpret street signs, bill boards, grocery handbills, newspaper headlines and advertisements, labels and directions on packages of food,

Household Arts Facilities in a Multiple Unit Center

cosmetics, medicines and other like commodities, telephone directories, transportation schedules, calendars, and notices in common community use. In some few instances the pupils may enjoy reading for pleasure but it is the exception rather than the rule. They should be able to apply the four fundamental processes of arithmetic in the purchase of things in their areas of experience, in the calculation of time and wages, and in other situations involving a practical use of numbers; they should know the geography of their local community and vicinity, and, to a useful degree, that of their state and nation; they should be familiar with community, state, and national civics and the outstanding events and characters of American history. Units of study or projects usually are suggestive of social studies content as a part of the integration. Accounts of current events in local and metropolitan daily and weekly newspapers and magazine articles may be used advantageously in familiarizing the pupils, in a concrete and practical manner, with the administration of local, state, and national government, as well as with other facts of civic, geographic, and historic interest.

2. Course of Study Should Grow Out of and Appeal to the Interests of the Mentally Retarded

"Interest is a powerful entering wedge to the child's mind." To capitalize upon the numerous interests these children already have, and to cultivate in them a desire for and an interest in more of these meaningful experiences is the job of the special class teacher. Little progress will be



Reading Can Be a Part of a Natural Learning Situation

made in elementary subjects or in manual activities if the pupil's tasks do not appeal to his interest and stimulate his imagination. Having secured his interest, he should be given an opportunity to use his imagination, to recall facts previously learned, and to apply them to the solution of a new problem. The mentally retarded require more detailed instruction, more actual demonstration of how to do, and more supervision, but with interest stimulated and maintained, more independent work is possible. Therefore, this trait should be cultivated.

Reading activities dealing with events and material outside the pupil's realm of experience and failing to enlist his interest, result in little more than word calling. If, on the other hand, the teacher utilizes the activities of each child as basic reading material, his interest will be stimulated immediately and greater progress will be achieved. The pupil will have a better understanding of the purpose and value of learning to read and his interpretations of printed symbols will be greatly facilitated when his own experiences in his own words are used in the written composition or story. Incidentally, such procedure has additional value in that each pupil must recall and organize a previous experience to give it oral expression. Children are natural egotists and are primarily interested in their own affairs. Appeal to this interest is a powerful motive in developing any kind of ability, both literary and manual. The teacher should observe the pupils for the development of new interests and utilize them appropriately.

3. Continuous Opportunity for Growth

Educational experience must provide for continuous physical, mental, and moral growth. This requires a sequence of progressive steps in the three aspects of the mentally retarded class program: the fundamental tool subjects, health and recreational activities, and manual activities. There should be a progressive educational program for each pupil, providing opportunity for constant advance in each area of experience. There should be no dawdling. When lessons or tasks are performed with acceptable skill, the pupil is ready for the next higher problem or process. It is not acceptable special class practice to use pupils during school hours for painting quantities of grade school furniture, for regularly operating a ditto machine for the use of the grades, and other work of a purely routine nature, which has ceased to have educational value for the pupils. Teachers should also guard against turning their classrooms into "shops" merely for the manufacture of articles having a ready sale. This practice obscures the primary objective of special education and opens the way to severe criticism. Special classes are organized and maintained for the education of the mentally retarded. This objective should not be minimized by the desire to make the class wholly or partially self-supporting. There is no educational justification in having pupils weave the same kind of baskets and rugs, to cane chairs, and so forth, after they have long since attained proficiency in these operations. Wherever practical, pupils should be encouraged to utilize their acquired skills for gain during leisure hours.

G. STANDARD 7. METHODS OF INSTRUCTION

". . . methods of instruction in the types of special classes enumerated (mentally retarded et al.) shall be subject to the inspection and supervision of the Department of Public Instruction and approved by it."

Children who are mentally handicapped comprehend the purpose of "bookish" skills, acquire them more readily, and retain them longer when their use is definitely associated with personal experiences and familiar materials. This statement is basic to the principle that, in teaching this group, the application of these skills should be motivated and vitalized through direct correlation with concrete manual activities, developed preferably in connection with a project or unit of study. The value of "academic" instruction will be greater if it is directly applied to the activities involved in a unit of study; and the tools and materials with which the children work will take on increasing interest as they study their source, nature, history, manufacture, and use.

Successful teaching of the mentally retarded presupposes the teacher's familiarity with the psychology of atypical children, and her ability to apply the psychological principles and methods of instruction will establish optimal educational situations and will tend to promote in the pupils that "illusive quality known as personal satisfaction and happiness"—the direct outgrowth of successful achievement. These suggestions should prove helpful:

1. Provide educational experiences at the child's mental level and not where he should be for his age. This will avoid failure and discouragement. It will be necessary in certain instances to drop back below the level at which the child might be expected to learn, as indicated by his level of mental maturity, in order to find the learning level at which the child actually functions. Particularly is this true of the older retarded children who have failed in regular grades from the first on up, but who have been pushed along on the basis of their chronological age.

2. Work with the pupils in selecting activities that appeal, that hold their interest, and that have practical value for them. Proceed from and build upon each child's interests. Mentally retarded children *are* interested in things and can be led by ingenious teachers to be interested in more and more things.

3. Use concrete situations and materials extensively, and employ the method of direct association between concrete material and abstract symbols. This refers to such devices as sense training material, educational toys, kindergarten blocks, beads, discs, splints, correlated seatwork, pictures, charts, posters, lantern slides, models, specimens, and miniatures, plant life and animals, as well as the tools and materials for the various manual activities incorporated in the program of study. Field trips,

visits to stores, shops, public buildings, parks, other schools, courts, farms, mines, and the like should be an integral part of the program as long as such visits are obviously and definitely related to the major unit of activity in which the pupils are engaged.

4. Reenforce instruction with repetitive drill. Greater drill is necessary for the mentally retarded that they may retain and use information acquired. To be effective, drills must be varied frequently, even though the underlying facts remain unchanged.

5. Give recognition to the educational value of all types of mental imagery. Instruction sometimes becomes effective only when general kinaesthetic and tactile imagery are elicited to reenforce the visual or auditory impressions or both. This is particularly true in teaching beginners to read and to spell. The Montessori sandpaper letters and wooden block letters may be helpful in the teaching of letter and word recognition and reproduction.

6. Modify instruction in accordance with short memory spans. There is a direct relationship between short memory spans and inability to progress normally in the grade subjects. This is evident frequently in learning to read and to spell. The combining and grouping of simple units, the application of rhythmical intervals, and of devices that appeal to every type of imagery, should be employed to compensate for this handicap.

7. If periods of formal instruction are included in the daily program, they should be of short duration and should be interspersed with periods of more natural learning activity. The lack of interest in formal subject matter on the part of the mentally retarded interferes with sustained attention. Progress can be achieved only in terms of small increments.

8. Motivate each child by utilizing his interest and by capitalizing on his particular capacities and achievements. Keep in mind that what may seem to be a very slight improvement for some children may constitute a significant step forward for a mentally retarded child. Encourage each child to compete with himself, getting him to try to do better each successive task that he undertakes. Competition between individual pupils has limited, if not questionable, value. Particularly is this true if their capacities and backgrounds are not comparable. Criticize constructively and give praise wisely. Pupils readily detect insincerity and deceit in simulated praise. They should learn early that only their best efforts are acceptable, that slovenly work will not be tolerated, that once a task is begun it must be satisfactorily completed before a new one may be attempted. A process may be so tedious that it should be alternated with other activities, but it should be completed within a reasonable time.

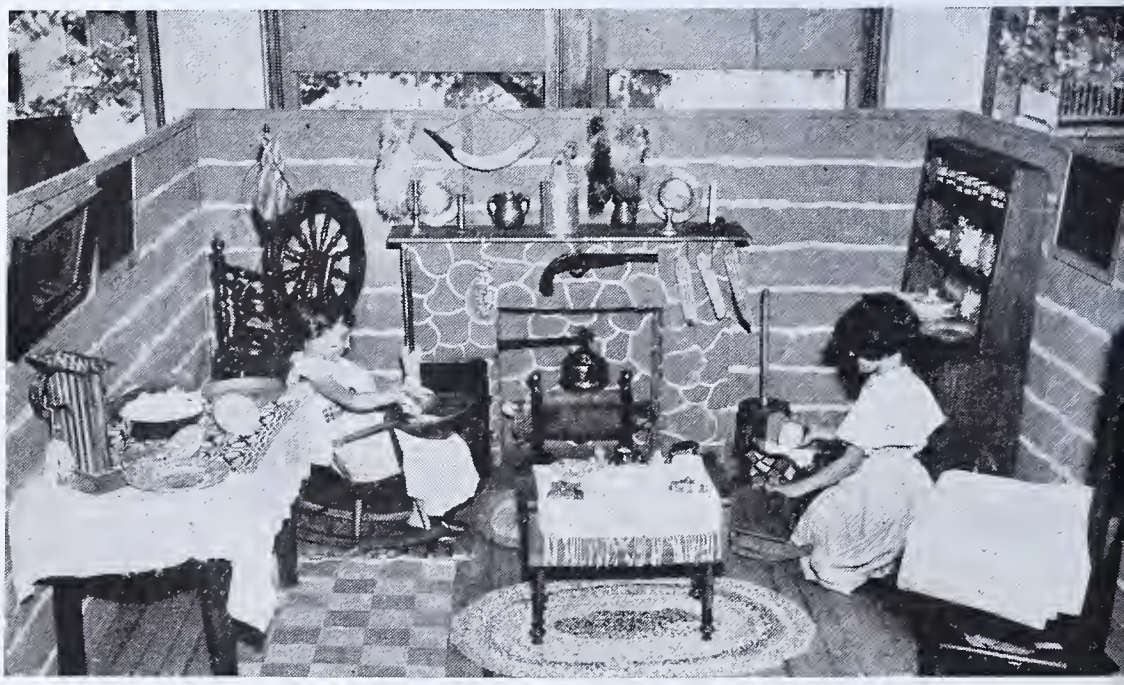
9. Camouflage instruction, wherever feasible, with the spirit of play or dramatization. Mentally retarded children frequently learn in spite of their handicaps when the approach follows such natural aptitudes.

10. Encourage and emphasize oral expression on the part of the pupils. The special class teacher should avoid obviously dominating the classroom situation. She should recede into the background as much as possible, stimulating and encouraging participation on the part of the pupils.

11. Aim to develop the abilities of each pupil—not to correct irremediable defects or to develop abilities beyond the pupil's capabilities.

12. Help the pupils to learn to evaluate their own work.

The maintenance of successful and useful human relationships is the ultimate aim of all education, whether it ends with the expiration of the compulsory period or the successful culmination of a college career. Mentally retarded pupils usually have forced upon them the educational handicap of a limited school career. Adequate education for them, as a rule, begins late and ends between the ages of sixteen and eighteen, when they are thrown upon their own resources with little preparation for successful participation in the activities of a work-a-day-world.



This Unit Made Real the Crafts of Colonial Days

If acquired habits, attitudes, skills, and knowledges are to function in consummating satisfactory social relationships and partial or complete economic independence, assistance must be given pupils in bridging the gap between school life and these adjustments. Since the school is the only agency having an understanding of each pupil's limitations and abilities, it is the duty of the school to pass on this information to employers and others in order that the employe may have a better opportunity to succeed.

H. STANDARD 8. QUALIFICATIONS OF TEACHERS

1. Certification Requirements

The State Council of Education has adopted the following certification requirements for teachers of the mentally retarded.

Regulations Governing the Issuance of Certificates for the Teaching of Classes for the Mentally Retarded, Effective September 1, 1938

a. Certificate of standard grade valid for teaching the elementary subjects may be extended to include the teaching of classes for the mentally retarded on the completion of twenty-four semester hours in special education distributed as follows:

(1) Courses Basic to All Special Class Certification: 6 semester hours
*Psychology of Exceptional Children or
*Education of Exceptional Children
Diagnostic and Remedial Teaching
Mental or Educational Hygiene

(2) Courses Definitely Applicable to the Teaching of Mentally Retarded Children 9 or 10 semester hours
*Special Class Arts and Crafts (first course, 2 or 3 s. h.)
*Special Class Arts and Crafts (second course, 2 or 3 s. h.)
*Student Teaching in Classes for Mentally Retarded Children (1 s. h.)
*Special Class Methods

(3) Special Class Electives: 8 or 9 semester hours
Clinical Psychology
Abnormal Psychology
Mental Tests (group) (a prepared elective)
Speech Correction
Mental Tests (individual)
Corrective Physical Education
Educational and Vocational Guidance
Related Courses in Sociology
†Teaching Experience

* Must be selected within those groups.
† Successful experience in teaching; in social service such as visiting teacher, probation officer, or social worker; in public health work such as school nurse, public health nurse, etc.; or in a psycho-educational or psychiatric clinic as psychological examiner or psychologist; may be counted to a maximum of six (6) semester hours at the rate of three (3) semester hours a year.

b. A college certificate valid for the secondary field may be extended to include the teaching of mentally retarded classes on the completion of thirty-six semester hours, including the distribution in groups one, two, and three, in Section A, and twelve semester hours selected from group four below:

(1) Courses Which are Basic Prerequisites for Teaching Special Classes Selected from the Following or Equivalent Courses: 12 semester hours

Teaching of Reading
Teaching of Arithmetic
Art in the Elementary School
Music in the Elementary School
Health or Physical Education in the Elementary School
Educational Measurements
Principles of Elementary Education
Child Psychology
Elementary School Methods
The Elementary School Curriculum
Teaching of Elementary Social Studies
Prepared Elective
Children's Literature and Story Telling

NOTES:

Educational Psychology is a prerequisite for the courses listed in groups a, (1) and b, (1) above.

All Temporary Special, Normal, and Provisional College certificates now valid will be renewed and made permanent in accordance with the conditions upon which they were issued.

Permanent certificates already issued to teach classes for the mentally retarded are not affected by these regulations. In institutions approved for the education of teachers of mentally retarded classes, students pursuing the four-year elementary curriculum may elect the above courses and on the satisfactory completion of the elementary curriculum and the twenty-four (24) semester hours in this special field will receive certification in both fields. Such dual certification will require at least one additional summer session.

These requirements are not set in terms of the teaching of the mentally retarded at either the elementary or secondary level as such. If it is recalled that the more capable pupils in the secondary level special class are not likely to go beyond the fourth or fifth grade level in their reading ability and that most of these children will be learning at lower levels, it will be seen that the educational problems of the secondary level mental retardates are essentially elementary in nature. On the other hand, there are demands of these secondary level special teachers that make it quite desirable that they be persons who have had at least some special work in homemaking or industrial arts, if not additional certification in one of these fields.

2. Other Desirable Experience

It will be noted in the above certification requirements that no teaching experience is necessary, other than the discharge of practice teaching requirements. It is desirable, however, that special class teachers should have had experience in the elementary grades before attempting to teach the mentally retarded. As a rule, primary teachers are better adapted to special class teaching due to their familiarity with the behavoir responses of younger children and with the content and methods of instruction employed in initiating children into the mysteries of the "tool subjects" of the elementary curriculum. On the other hand, the procedure of the special class differs entirely from that of the regular grades. Education in the special class takes on a new meaning and is no longer defined in terms of quantitative grade achievement.

3. Personal Characteristics

The education of the mentally retarded challenges the intelligence, the initiative, the creative ability, and the physical energy of the best teachers and offers a rich opportunity for continuous professional development. Above all, a special class teacher must be interested in children as individuals. An interested and critical attitude toward their work, observing the present and future needs of their pupils, appraising the capacities and abilities of their pupils, and adapting instruction accordingly, is essential for success. The teacher of the mentally retarded should have a natural aptitude, as well as special preparation, for practical arts and handicrafts. Musical ability and skill, more than ordinary interest in physical education, and experience in playground activities are definite assets. As to other qualifications, the teacher of the mentally retarded should be physically strong, emotionally stable, patient, sympathetic, realistic, optimistic, ingenious, stimulating, and should possess a well developed sense of humor.

V. THE CLASS PROGRAM

In addition to the standards that have been adopted by the State Council of Education and the suggestions that have been made in connection with them, certain other conditions can contribute much to a good educational program for the mentally retarded. The comments that will be presented in this chapter should be of real help to the teacher or administrator who is just starting a special class for the mentally handicapped. Following these various suggestions regarding the organization of the classroom, there will be a relatively brief statement on general methods. The more specific materials that are then presented should be of no small assistance to the beginning teacher.

A. THE ORGANIZATION OF THE CLASSROOM

1. Arrangement of the Classroom

The furniture of a special class should be so arranged as to take advantage of such factors as floor space, natural and artificial illumination, the amount and kind of equipment to be placed, and the work to be done. Woodworking benches and sewing machines should be placed in a good light; floor looms, after they are threaded, do not require close application of eyesight for operation and may receive secondary consideration so far as illumination is concerned.

The placement of pupils' desks or tables and chairs in a hollow square formation, as shown on the suggested layout for a single unit mentally retarded class in the Appendix of this bulletin, enables the teacher to move easily from one pupil to another. This arrangement also affords an opportunity to separate more widely the several sections of the class.

Very definitely, the furniture and equipment should be adapted to the children and the purposes of the special class program rather than forcing the educational program to fit the limitations of conventional or traditional arrangements.

Cuts showing specifications as to sizes and materials of certain storage facilities and certain required equipment are presented in the Appendix. This includes those for individual tables and chairs (four sizes), woodworking bench, kitchen utensil cabinet, tool storage closet, individual bins, nested tables, and paint table.

2. Storage Facilities

Unless ample storage facilities are provided, the mentally retarded class can easily become very unsightly and disorderly in appearance. Part of the education of the mentally retarded child should be in the proper care of tools and materials. This work cannot be effective unless there are adequate storage facilities. There is little excuse for not having sufficient storage space, if the classroom has sufficient floor area, as closets, shelves, racks, and bins may be made from orange crates and other salvaged lumber, if necessary.

a. Storage of Tools

Proper care of tools is fundamental to good workmanship. There should be a place for tools and all tools should be in place when not in use. Tools may be cared for in several ways, depending largely upon the number. In a special class center, the manual training room should have a large tool closet, whereas in an isolated class, a small wall closet or cabinet, such as is shown on page 166 in Chart H.-8, will suffice. Some tools may be kept in the rack of work benches, but drawers and chests usually are not satisfactory tool receptacles in classes for the mentally retarded. After proper storage space for tools has been supplied, definite procedure for their care should be initiated and followed.

b. Supply Closets

Closets with shelves (preferably fitted with wooden boxes with hinged lids) will facilitate the proper storage and handling of raw materials for loom weaving, sewing, brush making, leathercraft, and miscellaneous crafts.

Reed and cane are somewhat difficult to store satisfactorily, especially in a center where large quantities are purchased. There are at least three alternatives—(1) a corner closet in the classroom, or other convenient place, extending from ceiling to floor, with hooks in the top of the closet for suspending bundles of reed of various sizes; (2) a long, low chest (similar to a window seat) built in classroom or other convenient place, with lid opening the entire length and with one of the short ends of chest open through which to pull the reed or cane as desired. The inside of this chest is sectioned vertically as well as horizontally to keep the several sizes of reed or cane separated; (3) shelves or racks, outside of classrooms, on which the reed and cane may be laid horizontally.

c. Lumber Rack

A lumber rack or other suitable storage place is necessary when lumber is supplied in quantity. Small pieces of scrap wood should be sorted as to size and stored in closets or in packing boxes preferably outside the classroom.

d. Paint Closet

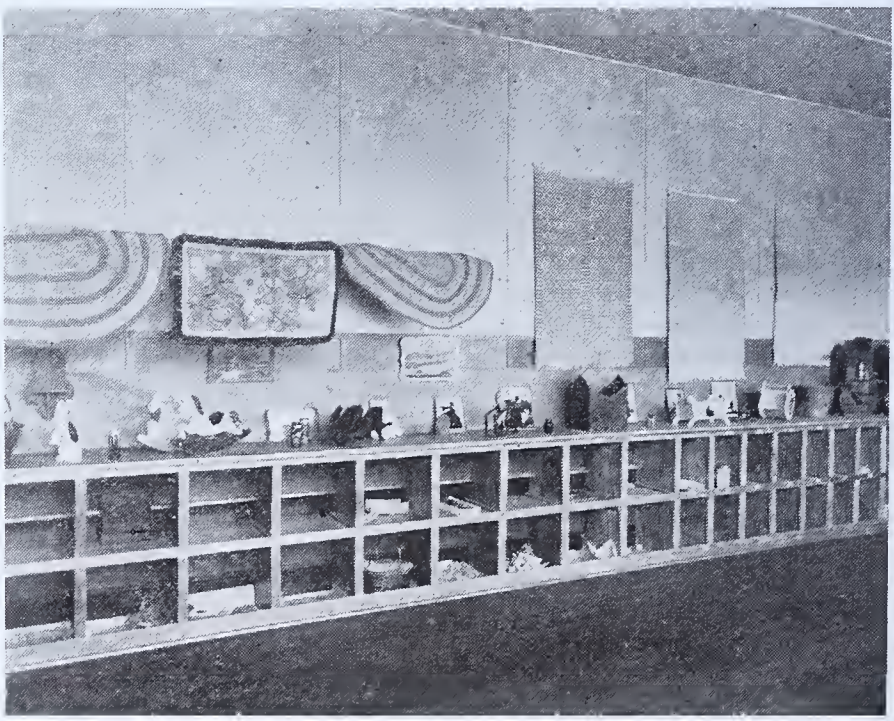
Paints should be kept, when not in use, in a metal receptacle other than the cans in which they are purchased. In multiple unit special class centers, using a considerable quantity of paint, closets of galvanized iron are satisfactory for this purpose. In some instances, such closets have been made in junior high school shops. A metal-lined shelf or a large metal box, or can, will serve the purpose in a single class. Preferably all painting should be done at a table with a metal top. If a metal-top table like the one shown on page 165 in Chart H.-7 is not supplied, the painting surface should be protected with layers of newspaper.

e. Wet Paint Shelf

A shelf with a base of wire netting provides an excellent drying place for freshly painted articles. Its use will prevent marring wood surfaces and will hasten the drying process, as the open mesh of the wire permits the air to circulate freely around the painted surfaces.

f. Individual Bins

Individual bins or sections for unfinished handwork will facilitate and improve classroom management. These are particularly essential when there are no other means in the classroom for storing unfinished handwork. There should be an individual section or bin for each pupil measuring approximately 15″ x 15″ x 15″. The drawing on page 161 in Chart H.-3 will be found useful if one is to be made.



Individual Bins for Unfinished Hand Work

g. Shelves and Display Cabinets

Adequate space should be provided for the display of finished handwork, such as shelves built just above the blackboards. Cabinets with glass doors are more satisfactory for displaying handwork and keeping it free from dust. Lacking facilities for such display, the handwork is ordinarily taken home by the pupils as soon as it is finished, and visitors have little idea of the type and variety of manual activities included in the educational program of the class.

h. Seatwork Table or Rack

The special class teacher will experience a need for a suitable place to keep seatwork, that it may be readily accessible to the pupils. A rather large table may be used for this purpose, but an open bookcase, a large library magazine rack, or a series of expansion pockets constructed of wrapping paper will be more satisfactory. A pocket for each member of the class, identified with his name, provides a convenient receptacle in which to place the daily seatwork in advance.

i. Filing Case

The teacher should have a suitable storage place, easily accessible, for filing the individual cumulative records of her pupils, handicraft patterns, bulletins, and other literature. The size will be governed by the number of pupils, *i. e.,* one or two drawers may be adequate for a single class, whereas a metal filing unit of four drawers or more will be required for a multiple unit center.

3. Library Corner

If space is available, a small open shelf bookcase, preferably made by the pupils, together with a small table and four or more chairs, placed in the "library corner," will aid in the development of an attractive place for the pupils to read quietly and independently. Chairs, tables, and settees may be made from orange crates and painted or covered with cretonne to harmonize with the color scheme of the classroom.

4. Decoration of Classroom

The classroom should be made as attractive as possible without undue expenditure of money. Good taste in classroom decoration can be secured inexpensively. Brightly colored unframed pictures of interest to children are easily obtained from magazines and children's picture books. Mounted on construction paper of uniform size and color, harmonizing with the color scheme selected for the season, and hung on a level with pupils' eyes where possible, they will aid in creating an attractive classroom atmosphere. The pictures, or the mountings only, may be changed throughout the year, if desired. Orange is a suitable color for the fall season. Seed pods, commonly called "Japanese Lanterns," add color and require little attention. Ivy and other vines that grow easily and which require little care may be placed at or near the windows in hanging baskets or other receptacles made by the children. Flowering plants and ferns are not suggested because of the difficulty in keeping them over vacation periods throughout the school year.

Window drapes and table scarfs, when used, should harmonize with the color scheme selected. Stenciling adds to their attractiveness. Such articles, however, usually involve the expenditure of the teacher's money, a practice which sometimes establishes an unfortunate precedent. Appreciation will be greater if the purchase price is earned by the children.

5. Care of Classroom

The pupils should be responsible for the care, orderliness, and cleanliness of the classroom, except such service as, in the teacher's judgment, should be rendered by the janitor. Regular duties should be assigned to the pupils, in accordance with sex, age, and ability, and, when proficient in one duty, each pupil should be given an opportunity in another.

Frequently a chart is displayed in special classrooms listing duties assigned to the pupils as illustrated below:

Care of Classroom

Pupils	*Duties*
Fenton ...	May dust the classroom chairs.
Linwood ...	May dust the library chairs.
Stella	May dust the model store.
Charles ...	May dust the library books.
Helen	May dust the looms and victrola.
Earl	May dust the window sills.
Betty	May water the flowers and feed the fish.
Harry	May dust the pupils' desks.
Carl	May sweep the cloak room.
Stephen ...	May check the calendar.
Edward ...	May sweep the floor.
Frank	May wash the blackboards.
George	May clean the erasers.
Jim	May take charge of the tool closet.
Alice	May stay after school to help.

Opposite each "duty" there is a slit in the poster sufficiently long to insert a card containing a pupil's name. Primary word and sentence building charts may be adapted to this purpose. Names alternate with duties in accordance with the teacher's judgment. Duties are assigned daily or weekly. If assigned daily, the chart is a center of interest to the pupils to learn their assignment for the day.

Posters, in general, add interest and attractiveness to the classroom, though their use is limited by regulations prohibiting the driving of nails into the walls. In such cases, one alternative is to fasten the poster temporarily with adhesive tape to wall surface or to blackboard surface not needed for instruction.

B. METHODS

It is not intended that this part of this bulletin shall be a comprehensive discourse on methods of helping mentally retarded in their learning activities. There can be found a goodly number of books, several of which are mentioned in the bibliography, that will treat this general subject in a more adequate manner than is possible in this type of publication. It is appropriate, however, to make the following comments on methods in general and to present some specific illustrative materials in order to

indicate the type of program for the mentally retarded that is recommended, and also in order to try to make this bulletin helpful to the beginning teachers or to the interested administrators.

To make suggestions on desirable teaching methods in a bulletin of this kind immediately creates a two-fold problem. On the one hand, it is necessary to urge the continued usage and development of a kind of educational method that is distinctly superior, one that is put into practice by superior teachers and one that many supervisors wish were understood and used by more teachers. On the other hand it is also necessary to suggest methods and materials, the use of which would be a distinct improvement over those now used by some teachers and supervisors, but with the realization that the devices and activities which are likely to result will still be far short of those toward which our modern philosophy of education points. It is hoped that these comments on methods will be construed by the former group to be a note of encouragement for them to continue in the direction in which they are already working, and it is also hoped that the rather specific suggestions on methods which are later presented in considerable detail will be of definite assistance to those teachers who happen to be in the latter group.

Suffice it to say that it is hoped that the educational program for the mentally retarded will have these characteristics:

1. The relationship between the pupils and the teachers will constitute an educational democracy rather than an educational dictatorship on the part of the teachers.
2. The program will be characterized by a point of view that is primarily child-conscious rather than by one that is primarily subject-matter conscious. This means that all possible effort will be directed toward each student's growth, in all of its various aspects, rather than toward the mastery of subject matter through mechanical, and all-too-often meaningless, drill.
3. The work will necessarily be individualized, although significant social relationships will be cultivated.
4. The work will be meaningful to the child as well as to the adult.
5. It may be neither possible nor desirable for the learning activities to be chopped up into fifteen or twenty-minute periods since the behavior of the children is not so artificially segmented.
6. The teacher's planning must necessarily be more advantageous in nature, although the teacher will not be relieved of the responsibility of anticipating major trends in learning behavior.

Regardless of the type of educational program maintained, a carefully planned and executed daily program, with clearly defined objectives, is a fundamental necessity in providing an optimal educational opportunity for every pupil in a class for the mentally retarded. The type of organization, *i. e.,* a single unit class or a multiple unit center, the ages of the pupils, their mental classifications and needs, and the homogeneity of the group, will influence the daily schedule.

1. Departmentalization

The question as to whether or not a departmentalized program is desirable for the mentally retarded cannot be answered categorically. It is unquestionably true that it is not feasible in the large majority of special classes for the younger retardates, due to the fact that centers for them are not so easily established on account of the difficulty of the younger children in getting to such centers. Even if such centralization of the younger children were possible, departmentalization for them would be questionable, to say the least. Even in districts where all the special classes are housed in one building, a completely departmentalized program is not the most effective educational procedure for the younger and less capable pupils. They are out of place in the woodworking shop, equipped as it usually is with eighteen woodworking benches and tools suited in size to older children, and with tools and machinery entirely beyond the ability of the younger children to handle properly. An industrial arts room might not be so inappropriate in its equipment for the younger children, yet their interests could be better served in a room specially equipped to meet their needs. Further, these children are too immature physically and mentally to profit to any great extent from work in the homemaking department. It is, therefore, recommended that, where it is possible to have classes for mentally retarded children less than ten years old chronologically, a non-departmentalized program should be carried on, preferably in separate school buildings scattered throughout the district. While a completely departmentalized setup, in which reading, arithmetic, shop work, and the like are each taught by a different teacher, has no place in a desirable program for mentally retarded children, there are situations where a partially departmentalized program would be highly desirable. It is possible to have in a six-room center, for instance, two classes of younger boys and girls (if it is necessary to have them in the center), two classes of intermediate boys and girls, one class of older girls, and one class of older boys. This separation of the older boys and girls would permit double daily periods in the shops for the older boys, in the homemaking department for the older girls, and double periods in other activities for the intermediate children. Not only would there be a splendid opportunity for pupils to be promoted from one level to another on the basis of their mental and physical development, as was suggested elsewhere in this bulletin, but there would also be the opportunity for the pupils to have teachers who were qualified in such fields as homemaking, industrial arts, and physical education, in addition to their special class certification. This arrangement would make possible the provision of more adequate equipment for these activities than might be possible if each separate room were to be supplied with minimal equipment. The equipment in this type of program would be used more fully, thus making possible a richer and less expensive special education program. One further possible advantage of such a departmentalized program would be the fact that the children would come into contact with several teachers as contrasted with their being with the same teacher all day for each of several years.

Such a departmentalized program for older mentally retarded children can be made to work as it should only if there is a sustained close coordination of the activities of the so-called academic classes with those of the other areas of specialization. Unless this is true and unless the coordinated program is one that is meaningful to the children, thus enabling them to relate their total activity to their everyday experiences and to be aware of the coordination of the work, the educational program is quite likely to disintegrate into a series of disjointed lesson periods that will be really as meaningless to the children as the conventional program from which they have been rescued. When a departmentalized program in special education is working properly, it is an educational delight; when its teachers confine their activities and interests to their particular subjects or rooms, it is an educational blight. The danger to be guarded against is that the departmentalized program is likely to become subject-matter-conscious rather than child-conscious. Mentally handicapped children need teachers who are experts primarily in children, and who are also competent in sound educational procedures.

2. Grouping the Class

After ascertaining the levels of mental maturity and the educational achievements of the pupils assigned to a class for the mentally retarded, as described on page 27 et seq., the teacher should classify the pupils into groups for instructional purposes for certain kinds of learning activities.

A single unit class, with a wide range of chronological ages and of mental levels, will require more sectioning into groups of approximate equal attainments and similar methods of learning than a more chronologically and mentally homogeneous group of the same size in a multiple unit or center. For the former type of class, at least three sections, perhaps four, will be necessary. Likewise in a center, there will be sufficient differences in achievement and in capacity to warrant the sectioning of the class into smaller groups. Such classification will facilitate whatever individual adaptations are necessary on a diagnostic basis. Furthermore, the personnel of the groups may not be identical for the several activities.

The suggested daily program included in the Appendix of this bulletin for the general guidance of teachers is planned for a five-hour day and for four sections or groups:

Group I—Pupils of lowest ability
Group II—Pupils of low ability
Group III—Pupils of intermediate ability
Group VI—Pupils of highest ability

3. Daily Program

a. Length of School Day

The length of the school day for the mentally retarded should equal that of the regular grades of the school district and should not be less than five hours for the following reasons:

(1) Pupils, as a rule, before assignment to the special class, have had an unsatisfactory school experience and the number of years they might have spent under adequate instruction have been curtailed.

(2) Uusually, the school careers of these children terminate between the ages of sixteen and eighteen.

(3) The acquisition of the "bookish" knowledges and skills, even to a lesser degree, requires relatively more time than normal children need.

(4) They must be taught much that the normal child learns without instruction through contact with its environment.

(5) They require longer periods for learning social controls and character trends necessary for adequate community adjustment.

In situations where pupils remain at school during the luncheon period and where a luncheon is prepared for them under the supervision of the teacher or teachers, the luncheon period may be counted as "time taught," as this period will then provide opportunities for instruction in the preparation of food, table manners, eating habits, and desirable social relationships.

b. Time Allotment

In a program where the various activities of the children are in a constant state of flux and where their work is not broken into short, predetermined study or recitation periods, it may be difficult at times to characterize the different learning activities as being one type or another. It is necessary, however, that these three types of learning activities be included:

1. Manual Activities or Handwork
2. Health and Recreation Activities
3. Literary Knowledges and Skills

c. Manual Activities

Even if the curriculum of the regular grades is limited to the minimal essentials and administered at a slow rate, it does not meet the needs of the mentally retarded. To accomplish this end, the daily program for them should emphasize manual activities and minimize academic instruction. Since some of the younger mentally retarded children may not have developed sufficiently to be able to profit from the conventional manual activities program, it may be necessary to make such adjustments for them as rhythm work, coloring, and other correlated seat work. On the other hand, there may be some instances where pupils, who are approaching the termination of their special class careers and who, in the judgment of the teacher, can profit no further from academic instruction, may be permitted to spend even a greater portion of the day on handwork, correlating their knowledge of the "three R's" with the work in hand wherever opportunity offers.

Diversified Manual Activities Adapted to Individual Abilities

A larger portion of the school day should be allotted to manual activities than to academic instruction because:

(1) The mentally retarded are definitely limited in ability to assimilate and to use, to any great extent, the content of a "bookish" course of study; as a rule, they have definitely demonstrated this inability while in the regular grades.

(2) The social and intellectual levels at which they function require comparatively little of the technical academic skills.

(3) The mentally retarded more nearly approximate normality in their motor responses, and their future livelihood depends on the development and exercise of these abilities.

(4) Through manual activities, the mentally retarded may be helped to acquire those mental abilities that are fundamental to adequate participation at their intellectual and social levels.

The choice of objects to be made during the manual activities periods and the materials for their construction should be a matter of pupil choice as far as possible. However, to avoid mere waste of material, the teacher must feel confident that the child is capable of performing the operations involved with an acceptable degree of success. Pupils should not be permitted to attempt the construction of articles beyond their general abilities. If tasks are adapted to the abilities of the pupils, the completed exercise should be a commendable example of the child's own work—not

one finished by the teacher or a more capable pupil. Exhibiting handwork that is not completely pupils' work creates in the minds of parents and patrons a false impression, false values in the minds of pupils, and sets an undesirable and dishonest example for the latter.

All manual activities should be progressive for each pupil. When a pupil has satisfactorily completed an article of handwork, he is ready for a next higher process or for an entirely new activity. Usually, handicrafts that have utilitarian values enlist the interests of the pupils much more than articles extraneous to their needs and experiences. When introducing new ideas or processes in the construction of articles, models, or samples should be available to stimulate greater interest and effort and to setup achievement standards.

It is appropriate to explain to the pupils, during manual activity periods, facts of science as they apply to the operation of articles they have constructed. (Some of the older boys in one of the special class centers built a replica of an elaborate weathervane they had seen in a yard near the school and were perplexed and curious to know how it operated.) These periods may also be used appropriately for developing appreciation, as well as the application, of the principles of art as they relate to size, form, and color combinations. Just as every written exercise should be a lesson in penmanship, so every article constructed or made by the pupils should be expressive of artistic, as well as of utilitarian, values. School journeys and nature study trips in connection with the development of projects or units of study may be considered as activities properly belonging to this period.

The Individual Manual Activities Progress Record form included in the Appendix of this bulletin will aid special class teachers in:

(1) Checking and evaluating each pupil's handwork at the end of the manual activities period each day

(2) Noting the needs of certain pupils for additional instruction

(3) Anticipating new activities for pupils who have satisfactorily completed an assignment

d. Health and Recreation Activities

Health and physical education are important for normal children. They are even more important for the mentally retarded. The prevalence of mal-nourishment among these pupils and the limited facilities in their homes for maintaining desirable standards of personal hygiene indicate that the entire daily program should cater to the building of better bodies and the development of good health habits. Mid-morning lunches, relief or rest periods properly distributed throughout the day, and the correction of postural defects through appropriate exercises, can well constitute an essential part of the daily program.

The personal appearance, as well as the health of these pupils, will be improved by the proper use of tooth brushes, combs, and nail files kept in the classroom in receptacles provided for them. No school work should be attempted with unclean hands. No occasion should be lost by the

special class teacher to apply the principles of health and safety. It may be advisable in some situations to provide bathing facilities for both boys and girls. Some very constructive work in health has been done in special classes for the mentally retarded in helping the children learn how to wash their clothes. More than one special classroom of this sort has resembled an embryonic laundry.

A daily health record, with some form of meritorious recognition, stimulates the achievement and maintenance of health standards. The criterion must be within the reach of every pupil in order that such recognition may be administered with fairness.

The importance of health and physical education and the need of profitable recreation in the lives of the mentally retarded, justify the recommendation that at least one hour of each day's program or its equivalent should be devoted to this phase of learning.

e. Literary Knowledges and Skills

The skill and proficiency attainable by mentally retarded pupils in the fundamentals of the tool subjects usually is so limited that they are of minor importance in the pursuit of gainful occupations. However, each child enrolled in a class for the mentally retarded should be granted an opportunity to acquire literacy for practical and individual needs. The amount of time given to this phase of the daily program should not as a general rule exceed two hours. While this time allotment has been reduced to a minimum, actually it will be greater than indicated on the daily schedule, since abundant opportunity is provided for the development and application of the "three R's" by correlating them with handwork in the reading of directions and specifications, in measuring and calculating amounts of material and their cost, and in studying the nature and source of materials used.

f. Correlatives of an Adequate Daily Program

In the organization and administration of an effective daily program for the mentally retarded, the incorporation of the following practices will lessen learning difficulties and help to provide, as nearly as possible, an optimal educational opportunity for each pupil:

(1) The unification or correlation of all learning insofar as feasible and practical in the development of projects or integrated units of study, directly related to the daily social experiences of the pupils.

(2) The utilization of relatively long periods, or blocks, of time for related subject materials and activities, resulting in economy of time and more effective learning.

(3) The sectioning of the class into groups of approximate achievement levels for conventional instruction in oral and written expression, spelling, and number facts.

(4) The teaching of the class as a unit in other literary subjects, the necessary adaptations being made by the teacher to compensate for individual differences.

(5) The profitable occupation of each pupil with correlated seatwork or manual activities throughout the day when working independently.

(6) The interspersing of difficult with easy learning activities.

(7) Limiting academic instruction to brief periods.

For the teacher who is accustomed, or is required, to work with a traditional time schedule, there is included on the inside of the back cover a Suggested Daily Program for a Single Unit Mentally Retarded Class. The time allotted in this program for literary subjects and manual activities applies for pupils of intermediate ability in a single class. Variations in the allotment of time to the several subjects of instruction will be necessary for pupils of lower and higher ability as discussed elsewhere in this chapter.

g. Correlated Teaching Devices

An abundance of concrete teaching devices, visual aids, and seatwork to supplement and reinforce instruction for those pupils who are not receiving the teacher's direct attention, are also fundamental to a successful administration of the daily program.

Many of these devices cannot be purchased, but must be made by the teacher, or preferably by the pupils, from magazine advertisements and other current literature. The construction of such teaching devices, involving measuring, cutting to line, folding, pasting, hectographing, and the like, can be rich in educational opportunity if the pupils doing this work see the value and meaning of what they are doing.

Seatwork devices should be organized and arranged in such a manner that pupils may be able to proceed with their work without assistance from the teacher. This provides opportunity for development in initiative and independence.

Seatwork, like all other activities of the day, should be progressive. After a seatwork exercise has served its purpose, it should not be repeated in identical form. Placing the pupil's initials on the back of seatwork envelopes or cards, after the desired results have been obtained, will tend to prevent a repetition of the task. All seatwork should be checked by the teacher.

h. Lesson Plans

The differentiated and individualized instruction of a class for the mentally retarded requires careful planning and anticipation by the teacher of supplementary teaching materials.

The suggested lesson plan forms found on pages 118 to 119 of the Appendix are offered as a device to aid the teacher in organizing a more

effective conventional daily procedure in connection with the development of projects or integrated units of study where the content of instruction is based largely on the daily environmental experiences of the pupils and information acquired from supplementary sources. If these blanks are reproduced by the local district in printed or mimeographed form, the amount of space should be increased proportionately to permit adequate notations and references.

4. Projects or Units of Study

Mentally retarded children, due to their limitations, cannot be expected to develop projects with the same intellectual curiosity as normal children, but, in spite of these limitations, the project or unit of study is a valuable educational device for them, provided the teacher evaluates in advance the present and potential abilities of his or her pupils and helps them select a project having appropriate possibilities for growth.

Learning by Doing

a. Units of Interest

The special class teachers of Philadelphia, most of whom have classes for the mentally retarded, have cooperated with Dr. Gladys G. Ide, Director of the Philadelphia Division of Special Education, in the development of a number of "units of interest" which can easily be used as a basis for major projects or minor class activities related to other projects. The list at the present includes these units:

The School
The Family in the Home
The Neighborhood
Transportation and Communication
Foods
Shelter
Clothing
Records (books, magazines, newspapers)
Problems of Everyday Living
Services of Government and Other Agencies
Vocations and Occupations
Learning to Drive a Car
Insurance
Licenses (dog, car, hunting, worker's, and marriage)
Banking

In the introduction to the units it is pointed out that: "The suggestions set down here represent a composite of the work in the various classrooms. In no one classroom did the working out of the unit follow exactly the points outlined. It is hoped, however, that the inclusion of many possibilities in these outlines will give the teacher some idea of the various phases of the unit which may be considered.

"The order of the units as they are given here is not meant to be fixed. It is important, however, that the child be introduced to the environment closest to him, later broadening out into a widened environment. The units have been selected and arranged so that, by the time the child has completed his school life, he will have covered the essential points in the social studies.

"Our children are so constituted that they learn through practical, first-hand experience. They understand those situations in which they have had opportunity to participate. The 'here' and the 'now' are possibilities for them to contact. That which is far removed in point of space or time can have little real meaning for them unless it is arrived at through some present-day problem.

"Therefore in these outlines the emphasis from the standpoint of history is upon history in the making rather than history of the past; the geography that is included is the geography of the immediate environment and its effects upon the life and work of the people, and other environments existing today which may be understood through contact with the immediate environment. No attempt is made in the outline to indicate division lines in subject matter; rather the unit is thought of as one large whole, the problems those actually in the minds of the children, and the activities those prescribed by the plans evolved in working out these

This Picture Was Taken, Developed, and Printed by Children in This Special Class

problems. Upon the problems raised and the resulting activities depends the subject matter gained by the children.

"It is suggested that as many first-hand experiences as possible be included. Contacts with workers in the neighborhood, visits to neighborhood places of business, planned observations of all types, will be of infinite value to the child in gaining an understanding of his environment. Bringing to his classmates information so obtained, discussing with them the organization of this information, planning for future activities, give opportunity for practical work in oral composition. Similarly, going to books, newspapers, and magazines for further information gives reading its real meaning. The manipulative work in the classroom offers much opportunity to the child for expressing his ideas, for learning through doing, and for gaining some idea of the possibilities of tools and materials."

b. Possible Student Activities

The following list of the children's possible activities mentioned in connection with these units should be helpful to the teachers regardless of the project undertaken:

(1) Gaining information
- (a) Observing with the group or as an individual
- (b) Planning for excursions
- (c) Going on excursions
  - (I) Observing from schoolyard and on neighborhood streets
  - (II) Visiting nearby industries
  - (III) Visiting museums
- (d) Reporting on observations
- (e) Discussing information gained
- (f) Recalling information previously gained or earlier experiences applicable to problems in hand
- (g) Going to books, pictures, magazines, newspapers, and people for information
- (h) Pooling information and ideas
- (i) Comparing data gathered; drawing conclusions; testing these conclusions by further reading or manipulative work
- (j) Learning scientific principles through experimentation
- (k) Experimenting with materials to learn their possibilities

(2) Expressing one's ideas
- (a) Raising questions on points not clear
- (b) Formulating problems
- (c) Planning for work to be carried on
  - (I) Making choices
  - (II) Deciding on tools and materials needed for work
  - (III) Drawing plans as a guide for work
  - (IV) Estimating quantities, sizes, costs

(V) Deciding on committees for various phases of the work

(d) Making rules for use of books, machines, tools, and materials

(e) Carrying out plans

(I) Reading sketches used in planning, working drawings, and blueprints

(II) Using everyday units of measure

(III) Expressing ideas in wood, paper, cloth, metal, leather

(IV) Expressing ideas through painting, modeling, original verse, rhythms

(V) Caring for tools and materials in classroom

(VI) Making containers for work

(VII) Repairing classroom articles

(f) Reading to the group to verify a statement

(g) Reading maps to get answers to problems

(h) Reading and interpreting graphs and charts

(i) Reading clocks and thermometers

(j) Browsing in libraries, museums, industrial plants

(3) Keeping records

(a) Making books of information gained

(b) Keeping record of progress in work

(c) Collecting pictures for books

(d) Drawing original pictures for illustration

(e) Outlining material to be included in books

(f) Writing short paragraphs

(g) Making various types of maps applicable to the content —picture, object, outline, relief

(h) Making graphs and charts

(i) Organizing material and pictures for books

(j) Planning for a class museum

(I) Collecting materials that relate to topic under consideration

(II) Arranging and labeling specimens for display

(k) Evaluating work

(l) Replanning for next steps

(m) Playing in the constructed work

(4) Sharing experiences with others

(a) Dramatizing situations involving the workers

(b) Reading to the group articles from books, magazines, and newspapers that give information on topic under discussion

(c) Utilizing library period to read stories that apply to the unit

(d) Reviewing work by means of exhibits, pageants, plays, arranging for assemblies, visitors' day, or for visit of another class
(f) Writing letters of inquiry, of invitation, of thanks
(g) Explaining exhibits and displays to visitors
(h) Celebrating holidays

c. Suitable Projects

(1) The subject matter of the selected project should be closely and obviously related to the daily experiences of the pupils and appropriate for their social and mental levels.

(2) It should grow out of the interests of the pupils, enlist their ready cooperation, and hold their attention sufficiently long to develop fully all educational possibilities.

(3) The project should supply a present need and anticipate a desire, giving opportunity for application of the knowledge while acquiring it, as well as direct practical preparation for life. (A special class boy, on learning how to send a money order, no longer needed to ask someone to fill out one for him each night when he returned the amount due the news dealer for papers sold after school. Thus, a present and permanent need was supplied and the development of the project anticipated the desire.)

(4) The project should provide sufficient related activities for full participation of every pupil.

(5) It should offer opportunity for group cooperation, sustained concentration, observation, and continuity of application.

(6) It should offer opportunity for pupil initiative, self-expression, and for progressive development in ability for performances of increasing complexity.

d. Preliminary Outline of Project and Other Preparation

Having selected an appropriate project or unit of study, the teacher should prepare an outline including:

(1) General and specific objectives
(2) Correlated content for the several class sections
(3) Correlated teaching devices
(4) Correlated manual activities

Preparation, both by the pupil and by the teacher, should include also:

(5) Collecting illustrative literature and concrete materials related to project
(6) Constructing introductory teaching devices and correlated seatwork

Definite assignments of work should be made regularly, the pupils being held responsible for readily accessible information and related materials. The more the pupils contribute, the more value the project will have for them.

Throughout the development of a project, the teacher should keep for reference purposes a record of correlated topics, subjects, and arithmetical problems, of school journeys, dramatizations, and other events, as well as sample copies of all composition booklets, spelling booklets, and other devices resulting from the study.

e. Integration of Subject Matter

As was pointed out in the discussion of the philosophy of special education, major projects usually contain possibilities for integrating or correlating all the subjects of the conventional program, viz., oral and written English, reading, arithmetic, spelling, penmanship, geography, history, civics, health, physical education, plays and games, art, music, and manual activities. The more complete the integration, the greater will be the pupil appreciation and comprehension of the total learning activity.

f. Duration

Projects will vary in the length of school time required for their development in proportion to their possibilities for producing learning situations. A full school year may be necessary to cover the educational implications of a project on "The Home," whereas a study on "American Indians" would probably cover not more than four or six weeks. When projects extend over an entire term or more, the continuity of the study should be broken at intervals for appropriate holiday lessons and observations.

Every project should culminate in a play or other suitable exercise. A tentative date for the climax should be fixed by the teacher several weeks in advance and the pupils encouraged to complete assigned tasks, especially the manual activities, within the specified time.

On completing a project, the teacher should evaluate the outcomes in terms of acquired attitudes, habits, skills, and knowledge. Such an inventory of achievements usually counteracts the discouragements the teacher has experienced.

g. Circulating Portfolios

A loan collection of project portfolios is available, on request, in the Division of Special Education, Department of Public Instruction, for circulation among teachers of the mentally retarded. These portfolios contain descriptions of projects, together with samples of reading booklets, teaching devices, and correlated seatwork created in connection with them, that have been developed in special classes in Pennsylvania. The faithful reproduction of projects from these portfolios is not encouraged. Each project or unit of study should be a new creation replete with local color.

Portfolios have been assembled on the following subjects:

The Home
The Farm
The Grocery Store
The Post Office
The Circus
Transportation
Health Education
Safety Education
Airports and Airplanes
A Study of Birds
Flowers

C. ILLUSTRATIVE PROCEDURES

Illustrative problems and activities are quoted herewith from two of the units of interest—"Vocations and Occupations" and "Learning to Drive a Car." With respect to the first one in particular, it should be pointed out that adaptations may need to be made to the local situation, since some activities may be more meaningful in a large urban center like Philadelphia than in some small community. Further, the statements of the problems and activities are written by and for teachers, thus necessitating vocabulary modifications and a more detailed breakdown of the cues supplied before they can be effective in a class for mental retardates. These are admittedly quite general in nature and of greater value to the older pupils. A much more detailed outline of a project on the home, suitable to the various age levels, will be presented. Field trips and visits, the preparation of related objects, lists, class reports, and forms, and other kinds of student activity should figure prominently in the development of such "units of interest" or projects.

1. Vocations and Occupations

A study of the opportunities which are possible in the neighborhood should be made. A list of different jobs may be made so that the children will have an idea of the possibilities within walking range of their homes. Other opportunities for study may be suggested by the children who have members of the family employed in different fields. The children should analyze the various jobs at which they might work—the sort of work to be done, the educational needs, the rate of wages, etc. Emphasis should be placed on those jobs which are available to the children in the class.

Illustrative Problems	*Illustrative Activities*
What business can we find in our community?	Children may make a list of the businesses within the neighborhood. (Probably the grocery and drug stores are the most common in all neighborhoods.)
What kind of grocery stores are found in your neighborhood?	Ascertain the difference between the neighborhood grocery store and the chain store.

Illustrative Problems	*Illustrative Activities*
What workers will be found in each?	Make an investigation of the duties and opportunities of the managers, clerks, and delivery boys.
What does the boy who delivers orders for the grocery stores do?	Make a list of the things a delivery boy needs to know. Learn the system of numbering houses in the neighborhood, the naming of the local streets, methods to use when the names and numbers are not shown.
How can goods be brought to the attention of the housewife?	Dramatize methods of a delivery boy's approach to the housewife. Dramatization of a housewife-huckster situation.
How can the delivery boy get orders for the grocery store?	Practice in the taking of orders, in the writing of orders. (See that the children realize the need for proper spelling and clear writing of quantities and names.)
What does the delivery boy earn?	Consider wages and hours.
What can the delivery boy become in the organization?	Ascertain next higher steps in the organization—hours, wages, and duties.
What are some of the important items for a junior clerk or a delivery boy to know?	Practice the making of change, politeness, courtesy towards the customers, correctness in putting up orders, etc.
How does the grocery store get its supply of meat, produce, milk, and other goods?	Study the problem of deliveries for local consumption. (How deliveries are made and what kinds of vehicles are used—how many men it takes to a vehicle—where the vehicles are kept—what kinds of jobs a boy of sixteen can expect to get in this field—what are the wages and hours?) Ascertain the sources of these commodities. Make maps showing flow of goods.

Illustrative Problems	*Illustrative Activities*
What does the driver of a milk wagon or a bread wagon do?	Investigate the type of wagon used by the milk or bread driver, the method of making deliveries and presenting bills, the need for writing out bills and notes, the duty of collecting money for goods left at a house, canvassing for new customers, hours and wages.
What other drivers or delivery men come into the neighborhood?	Study such services as those of the coal wagon driver; the delivery of coal to the house, hours and wages and other items of interest, the delivery of oils, gasoline, kerosene, milk in trucks in quantity, general dray, bartering from wagons (coal business in the winter time, fruit and vegetables in the summer, ice and other types of products which sell in the neighborhood). Consider each item as to duties, what the job requires in the way of writing and English, and hours and wages. Help children establish a miniature community and provide the various services studied.
In my own neighborhood, where can I store my car if I do not have a garage at home?	Make a survey of car storage possibilities in the neighborhood. The children should obtain information concerning the different types of garages in the neighborhood and what is charged for different types of storage. If possible, visit a garage.
Does the garage man need to know how to drive a car?	Study the moving of cars in a garage. Find reasons for much moving. Make a miniature garage to reduce the amount of moving.
What else will the garage do for your car besides storing it?	Learn the different kinds of work one can find done in a garage.
What is the work of the manager of a garage?	List the duties of the manager.

Illustrative Problems	*Illustrative Activities*
What is the work of the night watchman?	Ascertain the duties of the night watchman
What things does the man have to know who washes the cars? What is the way of washing a car?	Wash one or more cars. List the equipment concerned with washing a car.
What is the work of the man who greases the cars?	Ascertain the duties of the man who greases cars. Help grease car if possible.
What is the work of the man who repairs cars?	Observation of the duties of the man who repairs cars. Report on a series of such observations.
What other jobs do the neighborhood garages do?	Find cut about the State automobile inspection laws.
Do any of the workers in the local garages specialize on generators, on distributors, on carburetors, or any other part of the car?	List the number and kinds of specialiization. (The children can obtain answers to questions such as: What makes a mechanic and what does one have to do to become a specialist? How long it takes to prepare for this type of work. Where can one get this preparation? Where can we learn how to grease and wash cars?)
What wages do the workers in garages get?	Computation and evaluation of the various amounts earned, emphasizing duties and wages in jobs which the children are likely to be able to hold.
Are there open air parking lots in your neighborhood?	Learn locations of open air parking areas in neighborhood. Find out reasons for such provisions. Make a list of types of work done at such lots: parking, washing, greasing. Learn wages earned at such work.
What merchandise is for sale at garages and parking lots?	Observation of local garages and parking lots. Computation of costs of various services and supplies. Children should bring in items of goods for sale, such as gasoline, oils and greases, antifreezes and the like.

Illustrative Problems	*Illustrative Activities*
What happens to old cars?	Visit, if possible, one or two old car lots. Investigate sale of old parts, and junking of cars.
What great industries are a part of Philadelphia in general?	Investigation of textiles, bread bakeries, ice cream, candy, and any other industry which is fairly general and located near the school.
What other jobs might be of interest?	Listing of jobs offered by the city: the policeman, fireman, street cleaner, wagon and truck driver, ward service in hospitals, cleaners, janitors, garbage collectors, lamp lighters.
Are there different jobs for the boys and girls in the community?	Discuss the factory and domestic jobs which are primarily filled by women and which are filled by men. Consider hours, wages, and conditions of employment.
What do these people do?	Study the various duties of those in different fields of service—length of hours, wages, methods of getting jobs, requirements for these jobs.
Does the United States Government offer work?	Ascertain the requirements for the army and navy (secure specifications from recruiting stations); also for truck drivers and postmen.
What must I do to secure work?	Investigation of methods of recruiting such service.
What can I do to prepare myself for a job?	Inquire into the problems of the job seeker—age, appearance, language, manners.
What kind of jobs should be asked for personally? How should I ask for a job?	Dramatization of a job-asking situation—the employer, the job seeker, the office.

Illustrative Problems	*Illustrative Activities*
What is an employment agency?	Obtain information concerning location, function, costs and maintenance of local employment agencies. Investigate the State Employment Bureau. Dramatization of situations in an employment bureau.
When do you use a telephone in seeking employment? A letter?	Dramatization of the telephone situation. Writing letter requesting employment. Note: The letter and telephone are seldom used by children in securing work.
Should wages be the most important element in consideration of a job?	Enumeration of dead-end jobs. List the kind of job which young people are apt ot secure at first. Emphasis should be placed on the job which offers most in education and security for the future.
What jobs can young people find in the field of selling?	Investigation of the sale of newspapers (the hours children are permitted to sell; the ages of children employed on the street; the sex; the method of distribution of newspapers; the single salesman on the corner; the news-stand; the paper route. Dramatization of selling situations.
What can you make selling newspapers?	Listing of the advantages and disadvantages financially of the different methods of distribution. Dramatization of problems of change.
How can you get a shoe shining outfit?	Description of shoe shining outfit as oral English lessons. List the fittings required for the box. Find reasons for the price of such service (cost of materials, equipment, relative costs of similar services).
What do you say to a prospective customer?	Dramatization of selling approach to a prospective customer, the making of change, and departure of the customer.

Illustrative Problems	*Illustrative Activities*
What other selling situations are common in the neighborhood?	Investigate huckstering and the sale of goods from pushcarts—the type of goods sold—the cost of the carts or the horse and wagon—the license problems for this type of selling. Obtain copies of licenses for reading, etc.
If you are a housewife, what are some of the situations involving buying which you will encounter?	Survey and study of the many types of service bought by the housewife.
Can you make a budget suitable for the housewife in your neighborhood? What should be in it?	Make a household budget. (This budget should be made on the basis of figures supplied by the children. It should express about the level of the group discussing it. If very low, an opportunity may be made in the Foods, Clothing, or Health Classes to demonstrate needs. In drawing up a budget of a home, there is no need to point out discrepencies which will make the children feel inferior. That is, if the children come from homes using kerosene for lighting, then kerosene should appear in the budget, not electricity. Consider all the needs of the household for heating, lighting, food, and clothing.)
How does the housewife secure her supplies?	Listing, and perhaps mapping, of the places which the housewife finds in the neighborhood, where she goes to find her supplies. Dramatization of these situations, including money changing.
What advantage is there to a girl or boy who likes housework in a home? What are the disadvantages?	Investigate the problem of domestic labor, the advantages of board and room being furnished, the disadvantages of the hours, and the lack of freedom in the evenings.

Illustrative Problems	*Illustrative Activities*
Where can we get preparation for work in the home? What is the advantage of being prepared for a job before we go into that job?	Consideration and practice of the processes which are taught in the school kitchen and which are directly applicable to domestic labor and to jobs which involve the handling of foods. Consider also cooking in a restaurant, being bus boy in a dining room or under-footman in a house, being prepared for maid service in a large home or for chamber maid or maid service in a hotel, kitchen service in a restaurant which includes dish washing, vegetable preparing, and cooking.
What are the requirements of the Board of Health for food handlers?	Study the examinations required by those who handle food, the kind of garments that are worn by those who are in contact with foods, the requirements concerning diseases, duties of the Board of Health in regard to food handlers.
How can I protect myself in an industry where the materials are dirty?	Consideration of the need for care in washing the body, especially the hands, in certain types of industries, especially lead, which causes poisoning. Practice such washing, and nail cleaning, following with inspections. Consideration of other industries which are dangerous to health, the establishment of certain requirements of clealiness —changing of clothes and the utmost need for care in keeping injurious substances away from the mouth and away from food at lunch time.
Certain types of work require one to cooperate with others. How can I get along with my fellow workers so that things go easily?	Find and report on instances of malingering on the job, idleness, letting the other fellow do all the work or letting one's self be imposed upon by the other fellow, sportsmanship, and fair play in work as in play, doing one's fair

Illustrative Problems	*Illustrative Activities*
	share of the work. Keep a record of instances in and around the school where initiative and co-operation have been in evidence.
What are some of the dangerous situations which I can find in industry?	Discovery of instances illustrating the need for care in driving trucks or wagons on the street; situations in homes, kitchens, public places; in factories where one may be injured and where care is needed. Observation and description of safety devices and situations which make a worker take chances when they are unnecessary and expose other workers to dangerous conditions.

2. Learning to Drive a Car

While the general text for the teacher should be "The Motor Vehicle Code," other valuable aids—posters, bulletins, and leaflets may be obtained from an increasing number of State Departments, Bureau of Motor Vehicles, automobile clubs, automobile insurance companies. Road maps may be obtained and used in connection with the pupil's own locality.

Illustrative Problems	*Illustrative Activities*
What does Pennsylvania require of you before you may drive a car?	Investigation of the requirements of the State for driving; the learner's license, where it can be secured, its cost, how it must be used; the driver's examination, the driver's license, its cost, where it is secured, age, and physical fitness requirements.
What sort of questions are asked?	A study of the content of the examination. Ascertain the reasons for the answers to the questions. Fixation through drill on answers to questions. Learn the meanings of the signs used in Pennsylvania. (Miniatures may be made and used.)

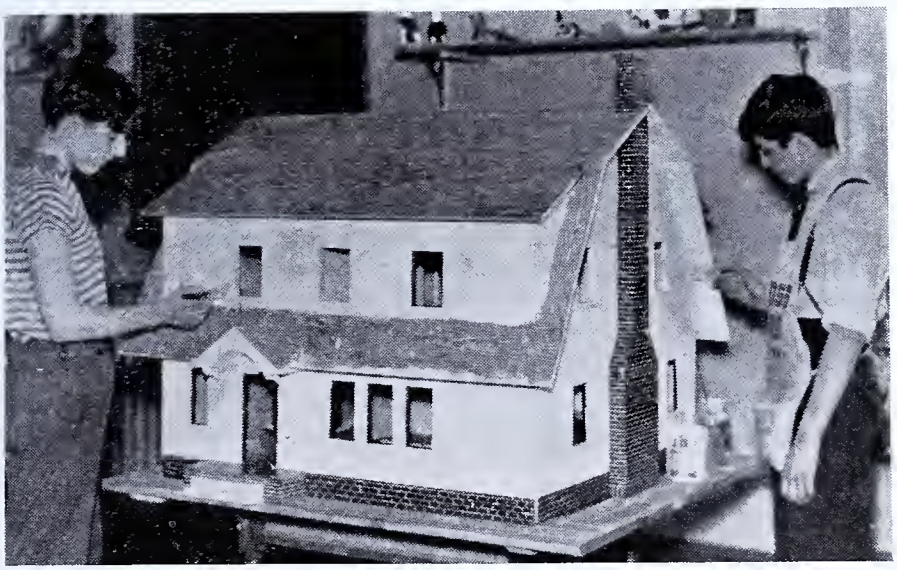
Illustrative Problems	*Illustrative Activities*
What are the State's requirements in licensing a car?	Investigation of the methods used in registration of motor vehicles, and requirements and costs of licensing. Find out the purpose of the registration and the penalties for failure to register. Learn the uses to which these funds are put.
Why are there so many deaths and injuries?	Analysis of cases of accident and probable causes. Make a list of common causes of accidents. Reporting illustrations of situations which are common causes of accidents—passing at top of hill, driving past a hidden road, etc. Reporting of situations likely to produce accidents. Review of rules of the road designed to prevent accidents. (Persist until children are conscious of the possibilities of accident.)
In what ways may a car contribute to dangerous situations?	Dicovering and listing of defects of mechanism which may be dangerous—improperly adjusted brakes, defective steering mechanism, defective lights, improperly inflated tires, etc. Patching tires properly and replacing them on wheels without pinching. Using a simple test for wheels to note defects—for steering gear—for inflation—to detect leaks. Ascertaining the effects of defective wheels or tires, improper alignment and other defects.
How is the driver likely to contribute to accidents?	Consideration of differences in people. Observation and reports on good and poor drivers. Illustration of quickness of response by testing pupil's responses to a stimulus (quickness in response to a call). Reporting of instances illustrating the need for quickness or response in emergencies.

Illustrative Problems	*Illustrative Activities*
What age group contributes most to accidents?	Investigation of tendency of youth to take a chance: to show off, to love speed, to drink and drive, to require others to drive for them (example—make way for them on street—youth drives cars well, but drives traffic poorly.) Evaluation of youthful driving, its assets, and its liabilities. Review of the rules of the road which youth is peculiarly apt to transgress.
What are your duties in case of accident?	Study the rules concerning accidents. Know the duty of the driver involved in an accident. Review of rules of the road in relation to accident.
What responsibilities are yours in case of an accident?	Investigation of and reporting on the responsibility of an individual for property loss and personal injury which he may inflict. Find the reasons for State statutes concerning the responsibility of the driver. Reporting of instances illustrating the ways by which a driver may or did comply with the law.
What is meant by public liability and property damage?	Learning of the provisions for insurance covering public liability and property damage. Consideration of the meaning of the various clauses in the policies.
What physical defects might cause accidents?	Consideration of defective vision as a cause of accidents—color blindness, especially red and green. Discovery of cases of color blindness. List the problems and risks of the deaf driver, the slow driver, the driver with heart disease. Report on any such cases.

Illustrative Problems	*Illustrative Activities*
What different types of cars are on the market today?	Investigation of the different kinds and makes of cars, their uses, costs, types, methods and costs of financing. Collection of illustrations of different types of cars. Reading of literature concerning different types of cars. Learning the different points to be noted in purchasing a car for a given purpose (include trucks and tractors.)
How should a car be cared for to keep it at its highest point of efficiency?	Obtain information on the servicing of cars. Find out the function of oil, gas, and water in cars. Learning of minor adjustments which can be made to keep the car efficient.
How must the paint be protected?	List the reasons for the housing of automobiles, the cost. Inquire of painters and garagemen concerning the effects of washing paints. Learn the protective values of wax. Wash a car. Wax and polish a car.
Why do we have state inspections of cars?	Find out what is done to automobiles during periodic inspections. Ascertain reasons for heavy penalty for not having car inspected. Make a list of reasons as to whether or not such inspection is a good practice. Find out what states have it. Whether the number is increasing. Give reasons for this change.
Why do we have the Pennsylvania Motor Police?	Comparison of Pennsylvania with other states in this. Determination of how the state highway police are paid.
How do you use a road map?	Comparisons of road maps. Follow routes by highway markers in town. Find how to check on detours. Give directions to follow to get to nearby towns.

A more detailed description of a project on "The Home" is included in this bulletin because of its appeal to universal interest and to illustrate the many possibilities for:

1. The utilization of concrete living situations for learning purposes
2. The integration of subject materials
3. The motivation of academic subjects through manual activities
4. The adaption of learning activities to the several ability levels
5. The construction of correlated teaching devices and supplementary seatwork



A Miniature House Constructed by a Mentally Retarded Class

3. A Home Project

The following description of a home project, as developed by Mrs. Katherine Hazlett, Monaca, Pennsylvania, with the seven girls and eleven boys of her special class, is given to illustrate the application of the project or "unit of study" method of teaching the mentally retarded. The enrolment of this class included a wide range of chronological ages, eight to seventeen years—and of mental abilities, from middle grade mental defective to mentally inferior pupils. The class was grouped into three sections—low, intermediate, and high—the personnel of the sections varying for the various learning situations.

Her outline of her aims was as follows:

a. General Aim.—To provide experience which would establish a background to aid each pupil in fitting his own life into his surroundings or to choose surroundings to which his capacities were suited.

b. Specific Aims

(1) To provide information on house planning

(2) To provide information on house construction

(3) To provide information on house furnishing

(4) To provide information on practical arts used in the building trades

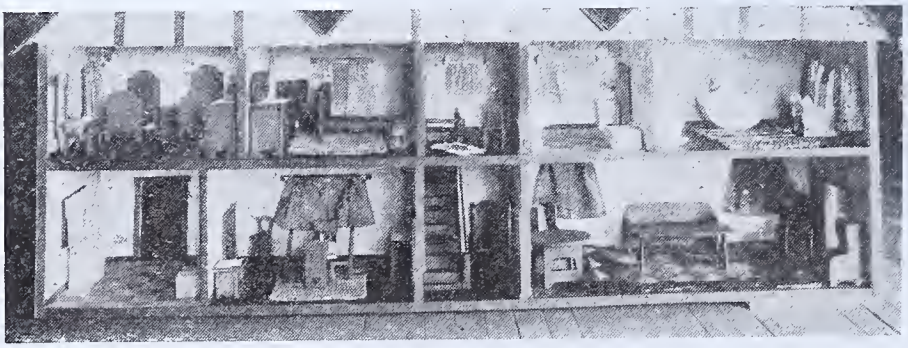
(5) To provide information on household arts

(6) To provide experiences which tend to arouse the feeling of need for the tool subjects and the acquisition of skills

(7) To cultivate appreciation of cleanliness and beauty in the home

(8) To develop a better understanding of the duties and responsibilities incident to family relationships

Class discussions on shelter, initiated by the teacher, led to school journeys to observe the types of homes in the neghborhood: single, double. duplex, bungalow, and apartment; the materials used in wall construction: wood, shingle, brick, stone, concrete, stucco, pebble dash, and cinder block; sources and preparation of building materials: lumber, brick, stone, sand, concrete and plaster; to observe types of workmen on houses under construction in the neighborhood: contractors, excavators, masons, bricklayers, carpenters, plumbers, plasterers, painters, electricians, and paperhangers. Prior to each journey, the teacher secured permission from the proper authorities to bring the pupils; she prepared an outline of the items to be brought to their attention; and those pupils who could write were instructed to take paper and pencil for notes. On these school journeys, attention was called also to the location of houses and the placement of windows, doors, porches, steps, and chimneys. A number of revisits were made by individual pupils to check the construction of their model with the construction of a real house.



Built and Furnished With Painstaking Care

c. *Building and Furnishing the Miniature House.*—A discussion on building a miniature house in the classroom resulted in devising ways and means to procure the necessary materials and in dividing the class into working units, the work being delegated according to the abilities of the pupils.

On request, a local grocery store furnished the special class with a large quantity of orange crates, which were stored temporarily in the basement of the school. Prior to starting the construction of the miniature, the pupils experimented in building shelves and modernistic bookcases from these crates. Then, using crates to determine the layout of the rooms, the pupils decided to build a two-story, eight-room house. A plan for each story was drawn on the blackboard, with all necessary measurements indicated.

One of the older and more capable boys, whose mother was building a home in the neighborhood, was elected by the class as contractor and boss carpenter of the miniature. Committees were appointed for each activity, the work of building and furnishing the miniature being distributed as follows:

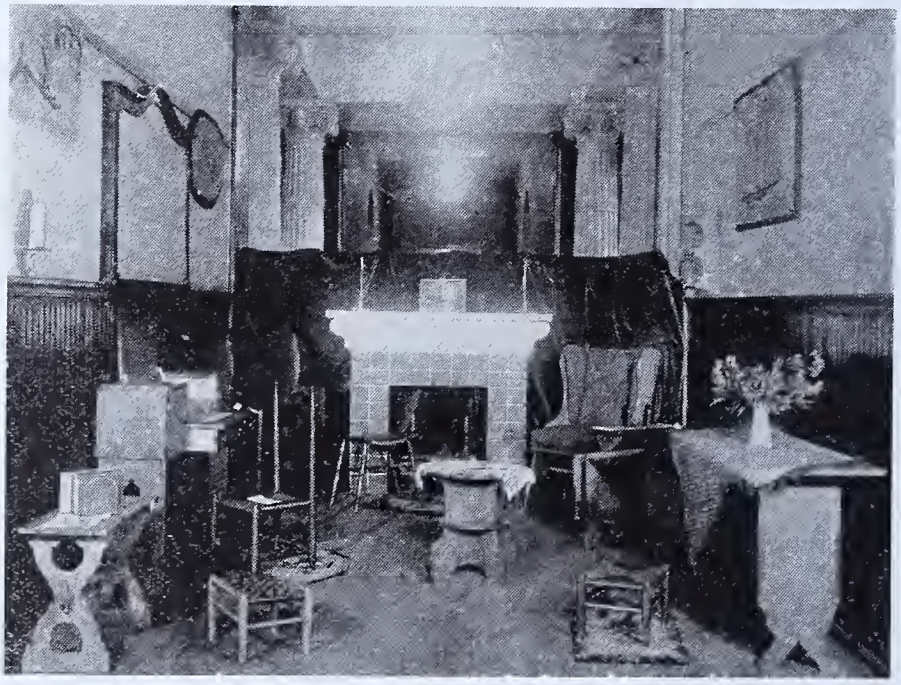
Older Boys	Building the miniature house
Older Girls	Making rugs, linoleum (cardboard covered with 1″ squares of colored paper and shellacked), curtains, drapes, cushions, towels, mops, bedding, (mattresses, sheets, pillow cases, quilts, comforts, bed spreads) lamps, and lamp shades
Younger Boys and Girls	Constructing wooden furniture, bathroom fixtures (carved from soap), pictures, mirrors, miniature library books, paper flowers, and raffia grass for lawn

Parallel with the building and the furnishing of the miniature, the boys and girls made rugs, towels, dresses, aprons, and many other articles for their own use and for the use of others.

Throughout the development of the project, the pupils brought to school quantities of trade journals, such as The American Builders' Magazine, The Carpenter, and The Mason and Plasterer; mail order catalogs of the Sears, Roebuck Company and The Montgomery Ward Company, as well as many copies of The Ladies' Home Journal, Pictorial Review, and Good Housekeeping. These were a rich source of information, as well as of pictures of tools and materials for illustrating reading booklets and arithmetic seatwork problems.

(1) Walls, Floors, and Partitions

Having determined the type of house, the number and arrangement of rooms, the location of windows, doors, stairways, archways, porches and chimneys on the plans, and having assigned the several items of work, the next step was to adjust the plans to the size of lumber salvaged from the orange crates. The result was a square house equivalent in size to



Activities Correlated With a Home Project

four orange crates standing on end. Many crates were completely knocked down and the best wood selected. The construction of the miniature followed accurately the plans and specifications on the blackboard. A frame was erected first; then the walls were built solid with openings cut for windows, archways, and doors. The front and back walls were removable.

(2) Foundation

The construction had not progressed far when one of the pupils called attention to the fact that a foundation wall had not been provided and that their house should resemble a real one as near as possible. Small blocks of wood were promptly cut, painted and shellacked to resemble bricks. Putty was used to cement them together for the foundation.

(3) Chimney

The next problem to be solved was the accurate placement of the chimneys in relation to the kitchen stove and living room fireplace.

(4) Roof

A wooden gabled frame was covered first with sheathing and over this was placed layers of shingles cut from cardboard and stained.

(5) Exterior Walls

Weather boarding placed crosswise and overlapping as in real frame houses was nailed to the frame. All boards were carefully cut to size and sanded. All holes were filled with putty before being placed in position.

(6) Glazing

Glass was cut to size for the windows and held in place by one-half inch wooden strips. Window frames, door jams, and baseboards were properly cut and carefully placed.

(7) Painting and Papering

Class discussions as to suitable interior and exterior painting and wall paper for the several rooms preceded the painting and the papering.

The house was then complete and ready for its furnishings. Discussions on furniture and furnishings took into consideration the appropriateness of floor coverings, size and proportion of furniture, and color schemes in furnishing the several rooms of the house.

When the miniature was completely furnished, there were many discussions on the care and order of the home, and the duties and responsibilities of each member of the family. The miniature afforded opportunities for practical lessons in cleaning, washing, ironing, convenient and attractive arrangement of furniture, and renovating.

(8) Integrating Instruction

The integration of all the conventional school subjects—reading, arithmetic, spelling, geography, history, language, music, art, health and recreational activities, and manual activities was practiced throughout the development of the project as follows:

d. Reading.[1]—The reading content for the entire class was based on the experiences of the pupils in building the miniature, on school journeys, on related information imparted by the teacher or gathered by more capable pupils from supplementary books and magazines.

Reading for the low division of the class resulted in a "dictionary" booklet of words, taught through direct association with objects, and simple sentences composed by the children on the family, the home and its furnishings, food and clothing—the words and sentences being appropriately illustrated by magazine cutouts.

These reading exercises were supplemented by the following correlated seatwork:

(a) Matching words and pictures
(b) Matching phrases and pictures
(c) Directive reading, such as "Draw a house and color it yellow"

The reading booklet developed by the intermediate division entitled "Our Home" included a series of stories on the function and furniture

[1] The term "reading" as used in this bulletin includes oral and written English and spelling, as well as oral and silent reading.

of the several rooms of the house, table manners, modern inventions in the home, "How to Keep the Family Happy" or "Safety in the Home." These stories were developed orally with the pupils while they were furnishing and equipping the rooms of the miniature. Where necessary, help was given for accuracy of expression. Each sentence in turn was written on the blackboard and read by the pupils, new words being taught as occasion required. The story was copied on tablet paper, corrected if necessary, and used as a model for copying it into reading booklets made by the pupils during the industrial arts periods. The length of a lesson was determined by the abilities of the pupils and the daily time allotment for this subject.

The following is a sample of reading lessons developed with the intermediate division of the class.

THE KITCHEN

Mother spends most of her time in the kitchen. We help her when we get home from school.

We prepare all the food for our meals in the kitchen. We cook, bake, wash and dry dishes, scour pans, polish silverware, and sometimes iron there.

The kitchen should be the cleanest room in the house. Everything must be put in the right place to make the kitchen look tidy.

Here are some things which will keep our family in better health, if we remember them and do them. Clean the kitchen well after every meal. Sweep the floor. Scrub or mop the floor more than once a week. Rinse the dishes with clean hot water. Use a clean tea towel every day. Wash hands before touching dishes or food. Empty the garbage once a day and wrap tightly in paper before taking it to the garbage can in the backyard.

The following correlated seatwork supplemented the reading exercises of this division:

(1) Matching words and pictures
(2) Matching phrases and pictures
(3) Incomplete sentences
(4) Comprehension questions
(5) Classifying words
(6) Directive reading
(7) True and false statements
(8) Multiple choice exercises
(9) Supplementary reading—"Our Play House"—Dobbs

Reading for the high division comprised a fully illustrated booklet entitled "The Workmen on Our House" with chapters on each of the following topics:

The Work of the Contractor and His Plans
The Work of the Excavator and His Tools
The Work of the Mason, His Tools, and Materials
The Work of the Carpenter, His Tools, and Materials
The Work of the Plumber, His Tools, and Materials
The Work of the Electrician, His Tools, and Materials
The Work of the Tinner, His Tools, and Materials
The Work of the Plasterer, His Tools, and Materials
The Work of the Painter, His Tools, and Materials
Our Trip to the Brickyard
At the Brickyard
Lumber and Lumbering
Building Materials: Concrete, tin, iron, copper, glass, plaster, paint.

The subject matter of the several chapters was developed orally first, then used for written composition. When completed, each child in turn read his composition to the class. Either there was one selected by the class as best or different parts were selected as deserving inclusion in a final copy. This was written on the blackboard by the teacher and copied by the pupils into their booklets. These compositions or stories were reviewed as reading lessons, the pupils exchanging booklets for practice in reading the penmanship of others. Booklets were carefully supervised to detect errors in punctuation, penmanship, and spelling.

The following are samples of reading lessons developed with the high division of the class.

THE CONTRACTOR

If we want to build a house, we go to a contractor. He has papers with drawings of houses on them. He calls these his plans. We talk to him about the kind and size of house we want and the materials we want him to use. Then he tells us how much it will cost.

The contractor hires tradesmen to carry out the plans of building our house. He hires the excavators, masons, carpenters, tinners, plumbers, electricians, plasterers, and painters. He also orders the supplies which each of these men need in order to do their part of the work. He must oversee everything which his men do so we will be satisfied with our house.

AT THE BRICKYARD

Mr. Marshall, the boss, met us at the top of the hill. He told us to be very careful, to stay close to him, and not to touch any of the machinery because it was a dangerous place for children who didn't obey. The rule of safety first should always be obeyed.

The clay to make bricks is moved from the hill near the brickyard. It is a hard gray rock. It is dumped into a machine which cracks it into smaller lumps. These go down a chute into a grinder where there are great wheels grinding over a revolving disc. We watched this machine grind the clay into fine soft powder. It is sifted and ground several times before it is ready for the mixer.

The elevator then takes it to the machine where it is mixed with the right amount of water. Molds for making five bricks at one time are put into the machine which automatically puts the mixed clay into the sanded molds and presses it tightly into the form of five bricks. The bricks pass out of this machine and are put into standing cars by men who are ready to grade the bricks as they come out. They come out of the machine fast enough to keep the men very busy.

The car of bricks is then put into a drying tunnel for two days. The temperature at first is eighty degrees. It is slowly increased. The next process is the burning. This is done in a kiln for three days with a very high temperature. The bricks are now ready to be taken out and sold to contractors for building.

The following types of correlated seatwork supplemented the reading exercises of this division:

(1) Matching words and phrases
(2) Incomplete sentences
(3) Comprehension questions
(4) Classifying words
(5) Directive reading and coloring
(6) True and false statements
(7) Multiple choice exercises
(8) Who, What, and When Problems
(9) Riddles

e. Arithmetic

This unit of study offered many avenues of approach in learning number facts and problems through direct association with concrete materials. The following outline indicates the adaptations for the several divisions of the class.

(1) Low Division

(a) Measuring parts of house, furniture, and furnishings with a 12″ ruler to learn inches and the number of inches in one foot

(b) Counting from one to ....., utilizing hectographed sheets, each containing a series of pictures of small houses showing doors, windows, and chimneys; of bricklayers laying bricks; of carpenters sawing boards; of mantel pieces decorated with clock and vases. These were used for counting the

number of houses, doors, windows, chimneys, bricks, boards, carpenters, clocks, and vases on the one page; to find the number on one line; to find the number on three or more lines, et cetera. Directions were given orally, answers were written on separate papers

(c) Learning clock facts using a clock dial

(d) Learning calendar facts.—Days and week were identified on calendar

(e) Learning identification of money—cent, nickel, dime, quarter, half-dollar

(2) Intermediate Division

(a) Measuring parts of the miniature house and of the classroom to learn feet and yards, using yard stick

(b) Learning time with clock dial

(c) Learning time in relation to wage problems

(d) Learning calendar facts in relation to days and weeks of work

(e) Learning dollar and cent marks

(f) Solving problems related to the buying and selling of tools and materials

(g) Figuring the cost of building a house (even amounts in dollars and cents)

(h) Figuring the cost of furnishing a house (uneven amounts in dollars and cents)

(3) High Division

(a) Solving salary problems based on hourly and weekly rates

(b) Solving problems on cost of materials and tools used in building a house

(c) Solving story problems on furnishing a house

(d) Dramatizing the buying and selling of furniture for miniature house

f. Spelling

The spelling words for each group were selected from the reading lessons on the basis of a pre-test which determined the words to be taught. After the words were thoroughly learned, each child copied them into his individual spelling booklet, using the words in new sentences.

g. Georgraphy and History

Related geographical and historical facts were presented to the class as a single group. Stories from "Round the World with Children" and items of general information on the following topics were read to them:

(1) Source of building materials

(2) Evolution of the home in America

(3) Homes of other peoples

These were supplemented by discussions in which the pupils volunteered additional knowledge gleaned from outside experiences. They also constructed a sandtable model depicting the influence of climate on types of homes, including homes of Indians, Eskimos, and South Sea Islanders.

h. Language

Formal language lessons and exercises were presented generally in the form of familiar games adapted to the House Project, e.g., names of articles of furniture, tools, and names of building materials were used in playing. "Upset the Fruit Basket," "I am thinking of something ....." "I see something ....." Multiple choice exercises were used to teach correct use of "sit" and "set," lie," and "lay," "a" and "an," "nail-nailed," "saw-sawed," "drill-drilled," "fix-fixes," "paint-paints," "has-have," "saw-saws," et cetera.

i. Music

Songs relating to home and activities in the home:

(1) Sheet music brought in by pupils

(a) Home Sweet Home

(b) My Old Kentucky Home

(c) That Tumbledown Shack in Athlone

(d) The Arkansas Traveler

(e) Here Comes the Sun

(f) Home on the Range

(2) Music Texts

(a) Hollis Dann Music Course Book I

Page 66—Tick-tock

Page 78—My Father was a Carpenter

Page 93—Round and Round the Village (Substitute Play House for Village throughout the song)

Page 94—The Mulberry Bush

(Last two were used as game songs in physical activities)

(b) Elementary Music (Music Education Series)

Giddings, Earhart, Baldwin—Ginn and Company, New York City

Page 48—Home

Page 102—A Cradle Song

Page 116—Baking

Page 120—Boxes
Page 127—The Old House
Page 142—Your Mother's Heart
Page 160—Chimney Smoke
Page 189—Old Folks at Home

(c) Introductory Music (Music Education Series)
Giddings, Earhart, Baldwin—Ginn and Company, New York City
Page 159—Homes

(d) The Eleanor Smith Music Course—Book II
Eleanor Smith—American Book Company, New York City
Page 69—Clock Song
Page 39—On the Ladder
Page 81—Spring Cleaning

(e) Songs of the Child World No. I
Riley and Gaynor—The John Church Company, New York City
Page 13—The Little Housewife
Page 14—The Song of Iron
Page 116—Weaving
Page 117—Sewing Song
Page 117—Norman's Work is Finished

(3) Toy Orchestra
Simple rhythm exercises in 2-4, 4-4, 3-4 time
(a) Interpretation of carpenter's hammer
Interpretation of carpenter's saw

(4) Victrola
Play home songs for music appreciation

j. Art

(1) Subject—limited to the home and its related activities
(2) Activities according to ability
(a) Tracing
(b) Drawing
(c) Cutting
(d) Coloring
(e) Mounting
(f) Bookbinding

(g) Cutting and mounting colored paper to illustrate methods of brick-laying
(h) Designing wall paper, linoleum, rugs, curtains, linen covers, et cetera
(i) Determining color combinations
(j) Modeling small clay articles for house, such as vases and lamps
(k) Carving kitchen sink and bathroom fixtures out of soap
(l) Constructing advertising posters of finished house

k. Physical Education

(1) Singing games
(a) Round and Round the Village (Playhouse)
(b) The Mulberry Bush
(c) When I was a Shoemaker (Excavator, carpenter, bricklayer, plasterer, et cetera)

(2) Other games
(a) Old Women from the Wood (Limited to duties in the household)
(b) Trades (Limited to those related to Unit of Study)
(c) Fruit Basket; Sewing Basket; Pantry
(d) Pass the Clothes Pins—("Pass the nails" or "spikes")
(e) Do This, Do That—Motions of workmen as sawing, hammering, climbing, papering, painting, et cetera)
(f) Going to Jerusalem (Renamed School Journey Game)

(3) Imitative Play
(a) The Pilgrims—(Pupils seated on their desks)
(I) Sailing for a new home—arms moving slowly in air to represent sails
(II) Waves dashing against ship—arms swinging from side to side gracefully in time to slow waltz music or song
(III) Landing of Pilgrims—Climbing down from desks to seats, then to the aisles. Kneeling. (Count for movements)
(IV) Building Homes. Chopping trees for logs
(Pupils stand astride, clasp hands, raise arms to shoulder, first left, then right, bend trunk forward and swing arms downward. Repeat exercise vigorously)
Sawing logs. (Place knee on seat, bend trunk forward and make sawing motion)
Rest at ease

(b) The Bricklayer
  (I) Lifting cement bag
  (II) Shoveling in the sand
  (III) Mixing the mortar
  (IV) Filling the hod
  (V) Carrying the hod up the ladder
  (VI) Buttering the bricks
  (VII) Making the wall
(c) The Excavator
(d) The Carpenter
(e) The Plasterer, et cetera

(4) Exercises

Ladder exercises on real ladder

(a) Climbing up and down
(b) Swinging on rungs of a ladder suspended not too high from floor
(c) Reaching and stretching for objects placed on ladder
(d) Stepping between rungs, on rungs, and skipping around ladder lying on floor
(e) Vary "d" for the smaller folks by drawing a ladder on the floor, placing rungs closer
(f) Vary "e" for more able pupils by drawing rungs at irregular distances

(5) Hygiene

(a) Health chart—daily inspection
(b) Hygiene relating to the house
  Cleanliness in kitchen
  Cleanliness in bathroom
  Cleanliness in bedroom
  Cleanliness in home in general
  Cleanliness in surroundings
(c) Safety
  Rules developed by class in working with tools
  Safety rules for the home

l. Outcomes

(1) Attitudes.—Most of which were known to have been established

(a) Pride in achievement that commanded the admiration of normal children and their teachers
(b) Increased enthusiasm and cheerfulness in performance in and out of school

(c) Greater interest in and an appreciation of the activities involved in the construction, maintenance, and functions of a home

(d) Interest in the source, nature, and cost of materials used in constructing and furnishing a home

(e) Interest in the people around them and appreciation of the daily occurrences of their immediate world

(f) Interest in the use of and respect for tools

(g) Self-respect and confidence in personal ability

(h) Greater appreciation of property values

(i) Appreciation of the advantages of cooperative effort

(2) Habits.

(a) More acceptable deportment

(b) Increased indepedence in using reference sources

(c) Formation of desirable health habits with reference to personal hygiene and sanitary care of the home

(d) Greater care in the use and handling of tools as a safety measure

(Whether or not other general habits were established is hard to ascertain. Certainly the children did learn to follow certain of the directions more accurately and they did pay attention to details in the projects more closely after the work had progressed. It is probably dangerous to claim or assume that these children carried over such attitudes or "general" habits to other, apparently unrelated, situations. This is, of course, the hope underlying all of this work.)

(3) Skills

(a) Ability to use sketches and plans in the development of a project

(b) Increased ability to manipulate tools and materials

(c) Ability to find related illustrative materials

(d) Ability to read for information on project

(e) Ability for two girls to begin careers as house maids, one as seamstress, and a boy as a helper in a lumber yard

(4) Knowledges

(a) The children gained a knowledge of the importance of working out the details of a plan on paper or blackboard before attempting to execute it

(b) The cost, source, nature, and preparation for use of building materials, such as lumber, brick, stone, concrete, tin, iron, copper, glass, plaster, and paint

(c) The cost, proper care, and use of household furnishings

(d) The proper use and care of tools and household utensils

(e) The type of work performed by each of the building tradesmen

(f) The importance of cleanliness in the home as a health factor

(g) The value of neatness and attractiveness in the home as a factor for happiness

(h) Increased knowledge in the fundamental elementary school subjects correlated with the project

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n. Supplementary Seatwork—Home Project

The samples of seatwork which follow illustrate the many possibilities for supplementing and reinforcing instruction in the tool subjects. Although many of the reading devices partake of the nature of achievement tests, they were used to check the comprehension and application of subject matter taught. They were compiled and used as teaching devices and not as testing devices.

READING DEVICE No. 1

WORD CLASSIFICATION

Put the following words in the right columns:

china closet	dining table	server
davenport	bookcase	cook
frigidaire	eat	end table
piano	visit	serve
buffet	range	bake
towels	read	sink
breakfast set	kitchen cabinet	wash dishes
radio	linoleum	towel rack

Kitchen	Dining Room	Living Room

A variation of this device may be made of oak tag with an envelope attached containing word cards to be placed in the proper columns instead of being written in by the pupils.

READING DEVICE No. 2 (Multiple Choice Exercise)

Tools Used in Building

Choose the correct word. Write it in the blank space.

1. The carpenter uses a ..... 1.
   shovel plane trowel soldering iron
2. The painter uses a ..... 2.
   saw wrench brush square
3. The mason uses a ..... 3.
   vice cutting snips trowel
4. The electrician uses ..... 4.
   cutting pliers wheelbarrow brush
5. The plasterer uses a ..... 5.
   chisel wrench trowel pencil
6. The plumber uses a ..... 6.
   wrench plane nail set ladder
7. The tinner uses a ..... 7.
   hod shovel soldering iron

8. The excavator uses a ..... 8.
file pincers shovel hammer

9. The bricklayer uses a ..... 9.
bit level screw driver nails

READING DEVICE No. 3 (Multiple Choice Exercise)

The Living Room

Put the correct word in the blank space.

1. In the living room we ..... 1.
eat sleep wash read

2. The living room is used most in the ..... 2.
morning afternoon evening spring

3. The living room is sometimes called ..... 3.
pantry parlor nursery dining room

4. An ..... joins the living room and dining room of our house. 4.
door hole opening arch

5. A ..... is built in our living room under the staircase. 5.
chimney attic bookcase clothespress

6. Mother should clean the living room ..... 6.
every day every minute every week

7. We go into the living room to sit down when we are ..... 7.
angry clean sick dirty

READING DEVICE No. 4 (Multiple Choice Exercise)

The Kitchen

Write correct word or words in blank.
Write correct word in blank.

1. ..... uses the kitchen more than any 1.
brother mother sister father
other member of the family.

2. The garbage should be emptied every ..... 2.
year week day winter

3. Dish water should be ..... 3.
hot and greasy greasy and cold hot and soapy

4. Silverware should be polished every ..... 4.
week year day summer

5. Clean tea towels should be used every ..... 5.
day hour Tuesday week

6. Clean the sink every day after the dishes have been ..... 6.
broken washed painted cracked

READING DEVICE No. 5 (True and False Exercise)

The Kitchen

Write "true" or "false" at end of each sentence.

1. The kitchen should be the cleanest room in the house because that is where food is prepared. ..... 1.
2. The kitchen should be swept after each meal. ..... 2.
3. The dishcloth should be kept looking white and smelling clean. ..... 3.
4. Mother washes her hands thoroughly before she handles food. ..... 4.

READING DEVICE No. 6 (True and False Exercise and Directive Reading)

Where the Workmen Work

Write "true" or "false" at end of each sentence.

1. The excavator digs the cellar in the kitchen. ..... 1.
2. The electrician puts wires inside the walls. ..... 2.
3. The mason builds the chimney from the cellar up. ..... 3.
4. The plumber puts the hot water tank in the dining room. ..... 4.
5. The carpenter nails the weather boards on the roof. ..... 5.
6. The painter paints the walls of the cellar. ..... 6.
7. The tinner puts the furnace in the cellar. ..... 7.
8. The plasterer covers the lath with paint. ..... 8.
9. The contractor hires men to work in the mill. ..... 9.
10. The tinner puts rainspouts on the house. ..... 10.

Something to Do

1. Draw a house.
2. Color the chimney red.
3. Color the foundation red.
4. Draw a door and two windows in front.
5. Draw a long ladder leaning against the roof.
6. Draw a bucket of green paint and a brush at the foot of the ladder.

READING DEVICE No. 7 (True and False Exercise and Directive Reading)

Workmen and Their Work

Put "Yes" or "No" at the end of each sentence.

1. The contractor builds the cellar.....( ) 1.
2. The excavator builds the chimney.....( ) 2.
3. The plumber puts the water pipes in the house.....( ) 3.
4. The electrician puts wires in the house.....( ) 4.
5. The painter pays the carpenter.....( ) 5.
6. The carpenter lays the flooring.....( ) 6.
7. The mason puts the roof on the house.....( ) 7.
8. The tinner puts in the furnace.....( ) 8.
9. The bricklayer oversees the workmen.....( ) 9.
10. The excavator digs the cellar.....( ) 10.

Something to Do

1. Draw a square cellar.
2. Write the word "cellar" above it.
3. Draw a shovel and wheelbarrow near the cellar.
4. Color the shovel handle red.
5. Color the wheelbarrow brown.

READING DEVICE No. 8

Who? What? When?

1. The contractor started building in October.
   Who..... What..... When.....
2. The excavator first dug the cellar.
   Who..... What..... When.....
3. The mason built the cellar next.
   Who..... What..... When.....
4. The workmen began work at eight o'clock.
   Who..... What..... When.....
5. This morning the carpenters nailed lath.
   Who..... What..... When.....
6. The plumber will put in the sink next week.
   Who..... What..... When.....

7. Yesterday the electrician wired the house.
   Who..... What..... When.....
8. The plasterer is coming today.
   Who..... What..... When.....
9. Last week the tinner put on the roof.
   Who..... What..... When.....
10. The painter will varnish the floors very soon.
    Who..... What..... When.....
11. Every Saturday the contractor pays his men.
    Who..... What..... When.....
12. The owner will move in before February 7th.
    Who..... What..... When.....

READING DEVICE No. 9 (Multiple Choice Exercise)

Furniture and Use of Room in the Home

1. Underline the furniture used in the living room. 1.

bed	davenport	buffet
armchair	kitchen cabinet	rocker
piano	end table	secretary
china closet	bridge lamp	bureau

2. Underline the furniture used in the dining room. 2.

end table	bed	davenport
china closet	gas range	server
chairs	buffet	bureau

3. Underline the furniture which may be used in the bedroom. 3.

davenport	buffet	dressing table
bed	dresser	china closet
chifforobe	server	

4. Underline what belongs in the kitchen. 4.

buffet	stove	radio
sink	kitchen cabinet	breakfast set
cradle	refrigerator	fernery

5. Underline what mother does in the kitchen. 5.

bakes	cans fruit	combs hair
cooks	cleans her teeth	irons
bathes	washes dishes	sleeps

READING DEVICE No. 10 (Directive Reading Exercise)

(Written work based on an advertising booklet)

1. Get a sheet of tablet paper and your pencil.
2. Write your name and the number of this card on the first line.
3. Look for a booklet called.....
(Insert name of booklet)
4. Copy from the cover of the booklet the uses of this building material.
5. Write a sentence about the picture on page ten.
6. Tell what building materials were used on the roof in this picture.
7. List the drawings that are shown on page thirteen.
8. Put your paper inside the booklet and take it to the teacher .

READING DEVICE No. 11 (Directive Reading Exercise.)

(Written work based on an advertising booklet containing pictures of furnished rooms.)

1. Get a sheet of tablet paper and your pencil.
2. Write your name and the number of this device on the first line.
3. Turn to page nine of.....booklet.
(Insert name of booklet)
4. Answer the questions below, making full sentences.
5. How many rooms can be seen in the picture of page nine?
6. Is the hall floor covered with carpet, cement, or tile?
7. What do you see between the two rooms shown in this picture?
8. How many electric light bulbs will be needed for these rooms?
9. In which room is the mirror?
10. In which room is the desk?
11. Is the banister made of wood, iron, or brick?

READING DEVICE No. 12 (Directive Reading Exercise)

Something to Color

(The pupils for whom this reading device was prepared were given an advertising booklet containing outline pictures of rooms to be colored).

1. Turn to page nine of .....booklet.
(Insert name of booklet)
2. Color the walls of the hall gray.
3. Color the tile floor brown and white.
4. Color the cedar chest red.
5. Color the draperies blue.
6. Color the living room walls yellow.
7. The upholstery is orange and blue.
8. Put colored flowers in both vases.
9. Color the electric fixtures brown.
10. A blue rug is on the floor.
11. The mirror has a red frame.
12. The high desk is reddish brown.
13. Color the lamp orange.

(Similar exercises were constructed for the nine other outline pictures in this advertising booklet.)

READING DEVICE No. 13 (Matching Exercise)

Building Materials

Match the workmen with the materials they use by writing the correct number before the materials.

1.	The plasterer uses	wire and switches	1.
2.	The carpenter uses	pipes and fittings	2.
3.	The tinner uses	walls and ceilings	3.
4.	The electrician uses	lights and outlets in the house	4.
5.	The bricklayer uses	lumber	5.
6.	The plumber uses	chimneys and cellar walls	6.
7.	The plasterer finishes	plaster and water	7.
8.	The electrician puts	bricks and tiles	8.
9.	The mason builds	tin and copper	9.

(The difficulty of this exercise may be increased to correspond with information the pupils have acquired.)

READING DEVICE No. 14

Tradesmen and Their Tools

Write the following names of tools in the right columns.

1. file
2. shovel
3. plane
4. trowel
5. soldering iron
6. saw
7. wrench
8. square
9. brush
10. vice
11. cutting snips
12. wheelbarrow
13. chisel
14. pencil
15. nail set
16. ladder
17. hod
18. pincers
19. marking gauge
20. scaffold
21. axe
22. bit
23. screw driver
24. brick hammer
25. brace
26. level
27. hand drill
28. cutting pliers
29. knife
30. horse

Carpenter	Mason	Plasterer	Electrician	Tinner	Painter	Plumber

READING DEVICE NO. 15

Riddles

1. It is made of wood.
   Carpenters use it.
   It helps them to reach high places.
   They build a new one for each house.
   If it isn't built strongly, someone will get hurt.
   Children should never play near it.
   What is it?
   Draw one on a house.

2. I am made of iron.
   I have a head and one leg.
   I am made in many different sizes.
   The carpenter uses me.
   A house could not stay together without me.
   What am I?
   Draw me with two or three of my brothers.

3. My body is made of wood.
   Painters use me.
   My head is the widest part of me.
   My black hair always stands straight.
   I must be cleaned before I am put away.
   What am I?
   Draw the painter using me.
   He has dipped me in red paint.

4. It is made sometimes of wood, sometimes of iron
   It has two legs, but doesn't walk.
   It has two arms also.
   It moves only when you hold its arms and push it.
   Builders always use it.
   What is it?
   Draw one full of sand.
   Draw a man behind it.

5. I am a large piece of blue colored paper.
   I have many white lines on me.
   These lines look like many boxes joined together.
   I am very important.
   The contractor looks at me very often.
   He shows me to his workmen every day.
   What am I?
   Draw me.

Language Exercise No. 1.

Fill blanks with the correct words, using one of the two words in brackets at the beginning of each sentence.

(use—uses)	1.	The carpenter.....a hammer.	1.
(use—uses)	2.	The painter.....a brush.	2.
(use—uses)	3.	Plasterers .....a trowel.	3.
(fix—fixes)	4.	Plumbers.....pipes.	4.
(saw—saws)	5.	The carpenter.....wood.	5.
(fix—fixes)	6.	Electricians.....electric wires.	6.
(paint—paints)	7.	Painters.....the house.	7.
(has—have)	8.	Tony's father.....a wrench.	8.
(mix—mixes)	9.	The mason.....mortar.	9.
(climb—climbs)	10.	Tinners.....a ladder	10.
(varnish—varnishes)	11.	The painter.....the floor.	11.
(hang—hangs)	12.	The paperhanger.....paper.	12.

Language Exercise No. 2.

Fill blanks with the correct word, using one of the two words in brackets at the beginning of each sentence.

(a—an)	1.	.....arch joins our living room and dining room.	1.
(a—an)	2.	I sit in.....arm chair.	2.
(a—an)	3.	Mother has.....electric iron.	3.
(a—an)	4.	The boys built.....house.	4.
(a—an)	5.	Put the doll on.....upholstered chair.	5.
(a—an)	6.	This is a picture of.....old cabin.	6.
(a—an)	7.	John made.....davenport.	7.
(a—an)	8.	Mother uses.....electric sweeper.	8.
(a—an)	9.	Bernice made.....igloo.	9.
(a—an)	10.	.....African hut was made by Tony and John.	10.
(a—an)	11.	Tony made.....buffet for our house.	11.
(a—an)	12.	Virginia made.....Indian home for us.	12.

Language Exercise No. 3.

Fill blanks with the correct word, using one of the two words in brackets at the beginning of each sentence.

(sit—set)	1.	.....on the davenport beside me.	1.
(sit—set)	2.	Please.....in the arm chair.	2.
(sit—sets)	3.	The sun.....in the west.	3.
(sit—set)	4.	It isn't polite to.....on the table.	4.

(sit—sets)	5.	Mabel.....the table for her mother.	5.
(sit—sets)	6.	The baby.....in his high chair.	6.
(sit—set)	7.	Let us all.....down.	7.
(sit—set)	8.	Please.....the table for supper.	8.
(sit—set)	9.	I can.....on the floor.	9.
(lie—lay)	10.	You should.....down when you are tired.	10.
(lie—lay)	11.	.....on your bed.	11.
(lie—lay)	12.	I will.....down for a rest.	12.
(lie—lay)	13.	Baby.....in his crib.	13.
(lie—lay)	14.	It is not good posture to.....in your seat.	14.

Types of Correlated Arithmetic

Addition Problems

2 tiles	4 bricks	5 slates
3 tiles	2 bricks	1 slate
3 shingles	5 nails	2 houses
4 shingles	0 nails	5 houses
4 chimneys	6 sacks	4 doors
5 chimneys	2 sacks	4 doors
1 room	4 rooms	7 windows
6 rooms	3 rooms	2 windows
6 steps	8 boards	3 screws
3 steps	2 boards	9 screws
6 spigots	3 bulbs	5 knobs
6 spigots	5 bulbs	7 knobs

How many hours did the excavator work?

2 hours Monday
4 hours Tuesday
3 hours Wednesday

How many weeks did the carpenter work?

2 weeks
1 week
3 weeks

How many men were working on the house each day?

Monday	Tuesday	Wednesday
2 carpenters	3 carpenters	1 plumber
1 electrician	2 plumbers	4 plasterers
2 plumbers	1 tinner	2 tinners

Thursday	Friday	Saturday
2 plumbers	2 electricians	5 painters
2 tinners	4 carpenters	2 electricians
4 carpenters	3 tinners	2 masons

Addition problems involving use of a clock dial.

1. The carpenter went to work at 8 o'clock. He stopped at 12 o'clock to eat dinner. How many hours did he work?
2. The carpenter started to work again at 1 o'clock. He worked until 5 o'clock. How many hours did he work in the afternoon?
3. How many hours did he work all day?
4. The mason was called on a job at 10 o'clock. He worked until 12 o'clock. How many hours did he work?
5. He went back to work at 1 o'clock. He finished everything at 4 o'clock. How many hours did he work in the afternoon?
6. How many hours did he work altogether that day?

Multiplication Problems

Using the following rates of wages, [1] find the wages of these workmen.

Excavator	65¢ per hour
Tinner	65¢ per hour
Mason	70¢ per hour
Carpenter	75¢ per hour
Plasterer	86¢ per hour
Plumber	80¢ per hour
Electrician	95¢ per hour
Painter	85¢ per hour

1. The excavator worked for 8 hours.
2. The mason worked for 6 hours.
3. The carpenter worked for 4 hours.
4. The tinner worked for 7 hours.
5. The plasterer worked for 3 hours.
6. The plumber worked for 5 hours.
7. The electrician worked for 9 hours.
8. The painter worked for 8 hours.

[1] Current standard schedules were used in formulating wage problems. This practice should be followed as closely as possible in adapting arithmetic to the abilities of the pupils.

Using the following rates of wages, how much will each worker receive?

Excavator	$10.00 per day
Electrician	$14.00 per day
Carpenter	$12.00 per day
Mason	$13.00 per day
Painter	$11.00 per day
Plasterer	$12.00 per day
Plumber	$11.00 per day
Tinner	$13.00 per day

1. The excavator worked 3 days.
2. The mason worked 6 days.
3. The carpenter worked 5 days.
4. The plumber worked 7 days.
5. The electrician worked 4 days.
6. The plasterer worked 3 days.
7. The painter worked 6 days.
8. The tinner worked 2 days.

How much would each workman receive?

1. The excavator worked 1 week at $11.00 per day.
2. The mason worked 2 weeks at $12.00 per day.
3. The carpenter worked 4 weeks at $12.00 per day.
4. The plumber worked 2 weeks at $11.00 per day.
5. The electrician worked 1 week at $14.00 per day.
6. The plasterer worked 2 weeks at $13.00 per day.
7. The painter worked 3 weeks at $10.00 per day.
8. The tinner worked 2 weeks at $10.00 per day.
9. Each workman's helper gets $7.00 per day. Each one has had a helper with him all the time. How much did each man's helper get?
10. How much do each of the helpers of the following tradesmen get? Each helper gets one-half the pay of the tradesman.

Example: The tradesman gets $10.00 per day

The helper gets ½ of $10.00, or $5.00.

1.	Excavator	$12.00 per day
2.	Mason	$10.00 per day
3.	Carpenter	$14.00 per day
4.	Plumber	$60.00 per week
5.	Electrician	$70.00 per week
6.	Plasterer	$50.00 per week
7.	Painter	$240.00 per month
8.	Tinner	$220.00 per month

Comparison Problems

1. The painter gets ..... more than the carpenter.
2. The painter gets ..... more than the excavator.
3. The painter gets ..... less than the electrician.
4. The painter gets ..... less than the plasterer.
5. The painter gets ..... more than the tinner.
6. The painter gets ..... more than the plumber.
7. The painter gets ..... more than the mason.

D. RECORDS AND REPORTS

A uniform method of keeping class records is highly desirable. It will facilitate the transfer of pupils from one school district to another. It will yield valuable data for research and directly comparable information for teachers and administrative officers. It will stimulate care and accuracy in record keeping.

1. Cumulative Pupil Personnel Record

The use of the Cumulative Pupil Personnel Record form printed in the Appendix of this bulletin is required in the interest of establishing in Pennsylvania a uniform system of compiling data on mentally retarded pupils assigned to special classes. The form should be printed or mimeographed on substantial paper in order that it may survive use over a number of years. If it is insufficient in size, extra pages may be added. The Division of Special Education, Department of Public Instruction, Harrisburg, Pennsylvania, invites suggestions from teachers of the mentally retarded for the extension and improvement of this form.

A Cumulative Pupil Personnel Record form should be filled out as completely as possible for each child at the time of enrolment and supplemented later as indicated.

2. General Directions for Recording Data

Family History and General Home Conditions—The facts to be recorded under these headings will orient teachers of the mentally retarded as to the hereditary and environmental factors influencing the development of their pupils. While some of these facts may be known to the teacher, a visit to the home will give authentic first-hand information and may serve to correct erroneous impressions based on biased opinions of informers. Before visiting a home, the teacher should familiarize herself with the general scheme of the form and with the items of desired information in connection with "Family History" and "General Home Conditions" listed. This form should at no time be in evidence during the visit, which should be a friendly one, the primary purpose being to secure the cooperation of the parents and to better understand the pupil.

Developmental History of the Child—The data required under this heading on the Cumulative Pupil Personnel Record may be procured from

the reports of the medical examiner and of the psychologist. If all of the required information is not available from these sources, facts regarding the developmental history of the child may be obtained from the mother by the teacher or school nurse. The correction of physical defects should be recorded promptly. The record as a whole always should be as complete as possible.

Educational History—Part of the information required under this heading will be found on the pupil's original registration and school progress cards. The teacher should determine, objectively if possible, at the time of enrolment the pupil's performance level in reading and arithmetic and record these facts in the places designated.

The educational progress and the individual and social development of each pupil should be evaluated and recorded by the teacher at the end of each school year, as long as the pupil is enrolled. Considerable care should be taken lest the determination of the pupil's educational progress cause the teacher to be too "academic" in her approach in the class. This is such a grave danger that, if the use of standardized educational achievement tests causes the teachers to concentrate too much on the "three R's," the practice of such testing should be discontinued.

After leaving school, pupils should be encouraged to report informally, periodically, to the teacher regarding their industrial or occupational experiences and relationships. This information, if faithfully recorded, together with a study of occupations suitable for the mentally retarded and of the operations involved, should yield invaluable data in planning an effective educational program and in adjusting such special class procedure to the actual life needs of mentally retarded pupils. This can become a source of great personal satisfaction to the teacher.

3. Report Cards

The insistence of special class pupils and their parents on reports of school progress necessitates the issuing of periodic reports. The usual reports given to the pupils of the regular grades are totally inadequate for the mentally retarded because the educational situations and objectives of the latter class differ from those obtaining in the regular grades. A primary objective of an educational program for the mentally retarded is the development of adequate personalities through successful achievement.

The attainment of this objective necessitates the adapting of lessons and problems to individual abilities. Under these circumstances, the inference is that results in all subjects of instruction will be reasonably perfect and, therefore, marks are superfluous. Of far more importance than the grade or level of achievement in subject matter is the maximum development of each pupil as an individual and as a member of his social group. Behavior patterns leading to adequate personalities and satisfactory social adjustment are indicated in the suggested pupil report card in the Appendix of this bulletin. (Other characteristics may be substituted for those listed, if so desired.) An evaluation of these factors will have

greater significance in relation to the ultimate goals of education than literary accomplishments or manual attainments.

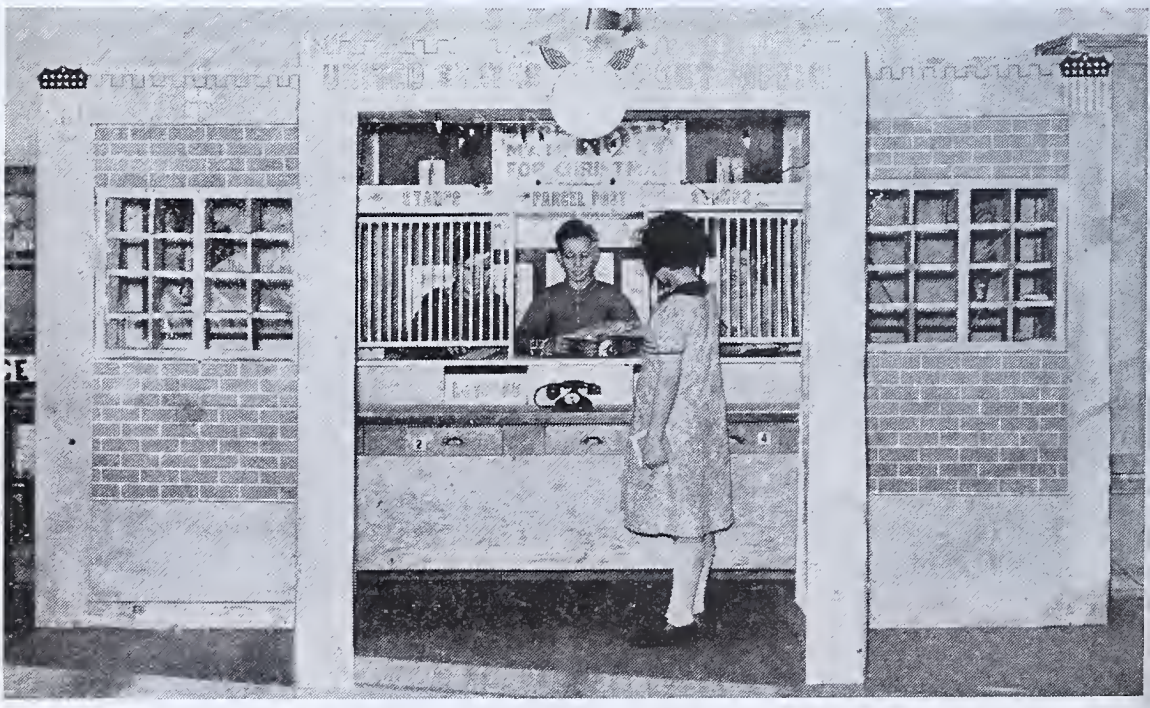
Space has been provided in the illustrative report card for indicating any outstanding or meritorious achievement of the pupil during the periods covered by the report. These statements may refer to exceptional progress in academic subjects or to outstanding accomplishments in manual activities. The number of report periods should conform to those of the regular grades.

At the close of the school year, the teacher should record her individual and social evaluation of each pupil in the Cumulative Pupil Personnel Record as a part of his educational history.

If the special class setup is such that a child may be promoted from one level for the mentally retarded to a higher one, a certificate of some sort should be used and the occasion duly celebrated by class "graduation" exercises, the awarding of the certificate of promotion at an assembly period when other awards or promotions are announced, or in any other manner that gives the child due recognition, but which does not carry with it a conciliatory or unusual acknowledgment.

4. Record Filing

Each classroom should be equipped with at least one single drawer, art-metal letter file, to insure the safekeeping of records; a set of 9 x 12 heavy cardboard letter guides with alphabetical sub-divisions; and a supply of lightweight, letter-size folders with gummed tabs at inside center



The Special Class Pupils Served the Whole Building With This Post Office Project

for attaching records. There should be at least one folder for each pupil with his name printed on the projection provided for this purpose at the top of each folder. The folders should be filed alphabetically in the letter file.

Content of Folder—Each folder should include all original and important data relating to each pupil:

1. Original registration and school progress cards
2. Reports of medical examiner
3. Psychological summary sheet with diagnosis and recommendation
4. Cumulative Pupil Personnel Record (see sample form in Appendix)
5. Specimens of various types of work taken at periodic intervals, which can serve as indicators of progress
6. Subsequent reports of examinations
7. Short, anecdotal descriptions of exceptional behavior

Kodak pictures of the pupil upon entrance and upon leaving the special class, as well as any outstanding handwork, will add interest and value to the record

E. CONCLUSION

The attempt has been made in this bulletin to present a brief statement of the philosophy of education as it pertains to the education of the mentally retarded. Reasonably specific suggestions have been made with respect to the steps to be taken in the establishment of single or multiple unit classes for these children, and the criteria for their approval have been indicated. It is hoped the suggestions concerning learning procedures will be helpful to a wide variety of teachers in different situations involving these retardates. The references to related readings, the sources of supplies, and the suggestions on the use of inexpensive handwork materials should be of value to both the experienced and prospective teacher.

To fail to consider special class provisions for mentally retarded children as anything other than a reasonable and necessary adjustment to their own capacities, abilities, needs, and interests, having as dignified a status as any other part of a school's program, is to fail to view the educational problem in its true proportions. May the reader be reminded of the fact that the provisions for mentally retarded children are but a part of a total special education program for all types of exceptional children, which is in turn, but a necessary phase of any adequate and efficient system.

VI. APPENDIX

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4. MAGAZINES OF INTEREST TO TEACHERS OF THE MENTALLY RETARDED

	Subscription Price
American Childhood. Springfield, Massachusetts: Milton Bradley Company	$2.50
Art Crafter, The.. Toledo, Ohio: The Art Crafter, Central P. O. 775	2.50
Character. J. M. Artman, Editor, The National Council on Education for Character and Citizenship; Chicago, Illinois 5732 Harper Avenue	2.00
Child, The. Monthly News Summary. Washington, D. C.: Childrens Bureau, U. S. Department of Labor	1.00
Child Development. Carrol E. Palmer, Chairman, Society for Research in Child Development, National Research Council; Washington, D. C.: 2101 Constitution Avenue	4.00
Childhood Education. Dorothy E. Willy, Editor, Association for Childhood Education; Washington, D. C.: 1201 Sixteenth Street, N. W.	2.50
Child Life.. William Dow Boutwell, Editor; Washington, D. C.: U. S. Department of the Interior	1.00
Children's Activities. Child Training Association; Chicago, Illinois: 1018 S. Wabash Avenue	3.00
Country Gentleman. Philadelphia, Pennsylvania: Curtis Publishing Company	.25
Grade Teacher, The. Florence Hale, Editor, Educational Publication Corporation; Darien, Connecticut	2.50
Home Arts. Augusta, Maine: Needlecraft Publishing Company	.50

Home Craft Magazine, The. Chicago, Illinois: Home Craft Book Shop, 737 N. Michigan Avenue 2.00

Home Craftsman. New York: Home Craftsman Publishing Company, 115 Worth Street 1.25

Home Needlecraft.. Augusta, Maine.

Industrial Arts and Vocational Education. Milwaukee, Wisconsin: Bruce Publishing Company 2.50

Instructor, The. (Formerly Normal Instructor Primary Plans). Helen Mildred Owen, Editor; Dansville, New York: F. A. Owen Publishing Company 2.50

Junior Arts and Activities. Earl J. Jones, Editor; Chicago, Illinois: 740 Rush Street 2.00

Journal of Exceptional Children. Harley Z. Wooden, Editor; Lansing, Michigan: 1235 W. Michigan Avenue. (Official publication of the International Council for Exceptional Children.) 1.50

Journal of Juvenile Research. Norman Fenton, Director; California: California Bureau of Juvenile Research, P. O. Box 3023, Stanford University 1.25

McCall Needlework Magazine. New York, New York: McCall Company, 230 Park Avenue ..... .35

Mental Hygiene.. New York, New York: National Committee for Mental Hygiene, 50 West 50th Street 3.00

Model Craftsman, The. New York, New York: The Model Craftsman Publishing Company, 110 West 42nd Street 2.50

My Weekly Reader. Eleanor M. Johnson, Editor; Columbus, Ohio: American Education Press, Inc., 400 S. Front Street. (Grades 1 to 6) ..... .75

National Handicraft and Hobby Catalogues. Boston, Massachusetts: Fellowcrafters, 64 Stanhope Street .....

Playmate. Cleveland, Ohio: A. R. Mueller Printing Company 1.50

Popular Home Craft. Chicago, Illinois: General Publishing Company, 919 N. Michigan Avenue 2.00

Popular Mechanics. H. H. Windsor, Editor; Chicago, Illinois: Popular Mechanics Company, 200 E. Ontario Street 2.50

Popular Science. New York, New York: Popular Science Publishing Company, 353 Fourth Avenue 1.50

Progressive Education. New York, New York: Progressive Education Association, 310 West 90th Street 3.00

Scholastic. Maurice R. Robinson, Editor; New York, New York, Scholastic Corporation, 250 East 43rd Street (Club Rates) 1.50

School Activities. (The National Extra-Curricular Magazine.) Harry C. McKown, Editor; Topeka, Kansas: 1515 Lane Street 2.00

School Arts Magazine. Worcester, Massachusetts: School Arts Publishing Company, Printers Building 3.00

School Life. William Dow Boutwell, Editor; Washington, D. C.: U. S. Department of the Interior, Office of Education ... 1.00

Training School Bulletin. Vineland, New Jersey: Training School for Backward or Mentally Deficient Children 1.00

Understanding the Child. Henry B. Elkland, Editor; New York, New York: National Committee for Mental Hygiene, 50 West 50th Street ..... .50

Woman's Home Companion. New York: Crowell Publishing Company, 250 Park Avenue, Service Bureau (for patterns, etc.) 1.00

Weaver, The. Jamaica Plain, Massachusetts: Emile Bernat and Sons Company 1.00

B. CERTIFICATION OF PUBLIC SCHOOL PSYCHOLOGICAL EXAMINERS AND PUBLIC SCHOOL PSYCHOLOGISTS

Certification as a public school psychological examiner or public school psychologist requires graduation from an approved college or university, the completion of one year of graduate work, and the completion of thirty-six or sixty-six semester hours of work respectively, before or after graduation, distributed as indicated below. These requirements for certification as public school psychological examiner or as public school psychologist became effective by action of the State Council of Education, June 15, 1937.

	Psychological Examiner		*Public School Psychologist*	
	Semester Hours		Semester Hours	
	Min.	Max.	Min.	Max.
1. General and Theoretical Psychology	2	6	2	9
Introduction to Psychology				
General Psychology				
Contemporary Viewpoints in Psychology				
Or equivalent courses				
2. Psychometric Techniques	3	8	3	10
Administration of Individual Verbal and Non-verbal Tests				
3. Other Specialized Techniques	8	15	12	20
Educational Measurement				
Diagnostics Testing and Remedial Teaching				
Teaching Mentally Retarded Children				
Preparation of Social Case Histories				
Measurement of Special Talents and Defects				
Measurement of Interests and Personality				
Clinical Psychology				
Or equivalent courses				
4. Related Courses	8	15	15	30
Statistics				
Abnormtal Psychology				
Mental Hygiene				
Educational Psychology				
Vocational Guidance				
Speech Correction				
Psychology of Personality				
Social Agencies				
Education of Exceptional Children				
Psychology of Childhood and Adolescence				
Psychology of Exceptional Children				
Juvenile Delinquency				
Criminology				
Neurology				
Psychopathology				
Experimental Psychology				
Or equivalent courses				
5. Clinical Practice	3	9	15	25

Experience as an interne in psychology at a mental hospital, or penal institution, or in a school for the feebleminded, delinquent, deaf, or blind; or experience in psychological work in a guidance clinic, or in a public or private school, may be accepted in discharge of the clinical practice requirement. Not less than three semester hours of clinical practice shall be completed in connection with the public schools. Credit for clinical practice may be applied toward either of these certificates on receipt of a statement signed by one of the following persons under whose supervision the clinical work was done:

1. Director of a clinic or hospital.
2. Professor of clinical psychology in a college or university.
3. A certificated public school psychologist.

One hundred and thirty-five clock hours shall be considered equivalent to three semester hours.

C. FORMS

1. Cumulative Pupil Personnel Record

(Obverse)

School District of.....

Mentally Retarded Class.....School Building

Pupil's last name	First name	Middle name	Address

Place of birth	Date of birth	Sex	Color	Lives with

FAMILY HISTORY

Father's name .....Nationality.....Occupation.....
Mother's maiden name .....Nationality.....Occupation.....
Parents living together—divorced—separated—remarried—father deceased —mother deceased (underscore)
Parents' attitude toward child.....
Parental cooperation with school .....
Language spoken in the home.....
Parental control .....
Financial status .....

GENERAL HOME CONDITIONS

Type of house.....Number of rooms.....Owned or rented (underscore)
Number of occupants: Parents..Sisters..Brothers..Relatives..Boarders..
Condition of home .....
Type of neighborhood .....

DEVELOPMENTAL HISTORY OF CHILD

Age of walking.....First tooth.....Age of talking.....
Childhood diseases .....
.....
Accidents .....
Special physical defects (vision, hearing, speech, orthopedic) .....
.....
Present health and physical development .....
Corrections recommended .....
Corrections made .....
Welfare agencies cooperating .....
Psychological examinations:
Diagnosis..... Recommendation..... Date..... Examiner.....
Diagnosis..... Recommendation..... Date..... Examiner.....
Diagnosis..... Recommendation..... Date..... Examiner.....

PERSONAL TRAITS

Attitude toward school before entering special class .....
Attitude toward school on leaving special class .....
Desirable traits .....
Undesirable traits .....

EDUCATIONAL HISTORY

Age on entering school...Grades repeated...Attendance: Regular / Irregular (check)
Age on entering special class.....Number of years retarded.....
Transferred to special class on recommendation of.....
School giving transfer .....
Academic ability on entering special class
Reading grade level.....Arithmetic grade level.....
(To be determined by special class teacher)

(Reverse)

Progress in special class	(To be recorded at the close of each year)[1] (Years in special class)									
	19	19	19	19	19	19	19	19	19	19
Reading—Mechanical ability, grade level										
Comprehension[1]										
Arithmetic fundamentals, grade level										
Ability										
Manual arts										
Household arts[2]										
Industrial arts[2]										
Health and recreation activities										
Development as an individual										
Health habits										
Personal appearance										
Orderliness										
Perseverance										
Thoroughness										
Reliability										
Obedience										
Responsiveness										
Industry										
Integrity										
Development as member of social group										
Cooperation with group										
(a) In work										
(b) In play										
(c) In keeping school attractive										
Respect for property										
Respect for rights of others										
Self-control										
Courtesy										

HOME VISITS

Date..... Visitor..... Remarks.....
Date..... Visitor..... Remarks.....
Date..... Visitor..... Remarks.....
Date..... Visitor..... Remarks.....
Date..... Visitor..... Remarks.....
Date..... Visitor..... Remarks.....

VOCATIONAL FOLLOW-UP RECORD

Left school..... Age.....
Employed at..... Wages..... From..... To.....
Employed at..... Wages..... From..... To.....
Employed at..... Wages..... From..... To.....
Remarks: .....
.....

[1] Use code: A—Superior; B—Good; C—Average; D—Inferior, except when recording grade achievement levels in reading and arithmetic.

[2] For use when there are separate departments for these subjects, as in a special class center.

2. Daily Lesson Outline

This daily lesson outline is intended for the teacher who is held to the traditional type of classroom procedure. Quite obviously, a more progressive program conducted on the basis of large units of experience can not, and should not, be reduced to this outline. (See also p. 118.)

MORNING SESSION DATE

8:45– 9:00	Personal hygiene Classroom duties Health survey (Informal period)	Pupils requiring special attention in personal hygiene: Assign duties on classroom chart Check daily inspection chart before school begins

9:00– 9:15	Assembly	Song or hymn	Bible selection	Patriotic song	Correlated songs	Individual talent
9:15– 9:25	Health instruction	TOPIC:				
9:25– 9:55	Oral and written expression	LOWEST GROUP Theme: Teaching materials: Correlated seatwork	LOW GROUP Correlated seatwork Theme: Teaching materials: Correlated seatwork	INTERMEDIATE GROUP Correlated seatwork Theme: Teaching materials: Correlated seatwork	HIGH GROUP Correlated seatwork Theme: Teaching materials:	
9:55–10:00	RECREATION	EXERCISE				
10:00–10:20	SPELLING	Letter: Teaching materials: Correlated seatwork	Correlated seatwork Words: Correlated seatwork	Correlated seatwork Words: Correlated seatwork	Correlated seatwork Words:	
10:20–10:30	PENMANSHIP	EXERCISE:	EXERCISE:	EXERCISE:	EXERCISE:	

(Continued on next page)

2. Daily Lesson Outline—Concluded

10:30–10:45	RECREATION	PHYSICAL EXERCISES:		GAMES:	PLAY MATERIAL:
10:45–11:00	DISCUSSION	THEME:			
11:00–12:00	Manual activities	(See manual activities record cards)			
		AFTERNOON SESSION			
1:15– 1:30	ASSEMBLY	STORY OR DISCUSSION TOPIC:			
1:30– 2:00	Number facts	LOWEST GROUP	LOW GROUP	INTERMEDIATE GROUP	HIGH GROUP
		Process: Teaching materials: Correlated seatwork	Correlated seatwork Process: Teaching materials: Correlated seatwork	Correlated seatwork Process: Teaching materials: Correlated seatwork	Correlated seatwork Process: Teaching materials:
2:00– 2:10	RECREATION	GAMES		PLAY MATERIALS:	
2:10– 3:10	Manual activities	(See manual activities record cards)			
3:10– 3:15	Preparation for dismissal	(See classroom chart)			

The above lesson plan outline is suggested as an aid to teachers in organizing learning exercises and in preparing correlated learning materials for each group of pupils in the class. Such an outline will serve as a basis for evaluating evidences of growth and for determining the extent to which the educational objectives of the unit have been realized. This outline coincides with the suggested daily program attached to the inside of the back cover of this bulletin. It is suggested that teachers have this form duplicated in quantity on two sheets of paper 8½" x 11" and keep them in a loose leaf book for ready reference. This record and the manual activities records will be invaluable to a substitute teacher.

3. Individual Manual Activities Progress Record

_____Special Class

_____ _____
(Pupil) (Teacher)

From _____ To _____ 19_____

Week of	Monday	Tuesday	Wednesday	Thursday	Friday	Remarks
3/25	Bird House N. S. More sanding needed	S.	C.	Bird stick S.	S.	Followed directions Sawed accurately Worked diligently and carefully
	Knitted cap S.	S.	S.	C.	Woven purse S.	

This individual progress record should be used to indicate pupil growth in the acquisition of desirable attitudes and habits, and development in the use of tools and materials. It should be used also to reveal to the teacher weaknesses of the pupil and the type of exercises neeessary to correct these weaknesses. All information should be entered on an objective concrete basis, except where it is desired merely to indicate satisfactory progress.

The space in which the name of the article is written will indicate when it was started.

At the end of each manual activities period, examine article and record progress (satisfactory or not satisfactory), date of completion, etc. Use abbreviations. Pupils sometimes have more than one article in course of construction, so two spaces are provided for each day. The above blank covers a period of ten weeks. This form could well be mimeographed on both sides of a 5″ x 8″ plain filing card.

Various adaptations of this report are possible, such as a complete class record on one sheet giving substantially the same information; or a combination of the latter and a cumulative individual progress report for each pupil.

The use of a device such as this should not be construed by the teacher to mean that once the child's activity has been checked or approved, the educational purpose has been served. It still remains the teacher's responsibility to help tie in the activity thus recorded with the rest of the project the child may be working on.

School Medical Examination

Remedial defects should receive immediate attention.

Date	Physical Defects	Date Corrected

Signature of Parent or Guardian

Report Periods — I have examined this report.

1 _____

2 _____

3 _____

4 _____

5 _____

6 _____

(Reverse)

SCHOOL DISTRICT OF

REPORT CARD

.....Special Class

Term 19 –19

_____

Pupil's name _____

Pupil's address _____

_____

Teacher

4. Special Class Report Card[1]

(Obverse)

SOCIAL DEVELOPMENT	Report Periods 1.	2.	3.	4.	5.	6.
1. HEALTH HABITS Follows rules of health taught						
2. PERSONAL APPEARANCE Keep teeth, face, hands, and nails clean						
Keeps hair combed and clothing neat and clean						
Sits, stands, and walks correctly						
3. ORDERLINESS Keeps desks, books, and other materials in good order						
Works neatly						
4. PERSEVERANCE Keeps on trying in spite of discouragement						
Completes work started						
5. THOROUGHNESS Puts forth best effort						
Is willing to correct mistakes						
6. RELIABILITY Keeps promises						
Is honest and truthful						
Can be trusted						

SOCIAL DEVELOPMENT (Continued)	Report Periods 1.	2.	3.	4.	5.	6.
7. OBEDIENCE Works well with the teacher						
8. RESPONSIVENESS Takes suggestions pleasantly						
Gets along well with others						
9. INDUSTRY Works hard without wasting time						
10. PROMPTNESS Is ready for work or play at the right time						
SOCIAL DEVELOPMENT						
1. COOPERATION WITH GROUP Works well with others						
Plays well with others						
Helps to keep school room clean and orderly						
2. RESPECTS RIGHTS OF OTHERS Stands for fairness in work and play						
3. RESPECT FOR PROPERTY Uses books, tools, and materials carefully						
Takes good care of the school						

(Continued on next page)

4. Special Class Report Card[1]—Concluded

(Obverse)

SOCIAL DEVELOPMENT	Report Periods 1.	2.	3.	4.	5.	6.
4. SELF-CONTROL Thinks before acting						
Doesn't bother others						
5. COURTESY Speaks and acts politely						

SOCIAL DEVELOPMENT (Continued)	Report Periods 1.	2.	3.	4.	5.	6.
6. ATTENDANCE Sessions present						
Sessions absent						
Sessions late						

Marks: C—Very seldom; B—Part of the time; A—Practically always. (Some schools may wish to omit letter marking and give fuller description of evidence of growth.)

NOTABLE ACCOMPLISHMENTS

First Report Period _____

Second Report Period _____

Third Report Period _____

Fourth Report Period _____

Fifth Report Period _____

Sixth Report Period _____

Successful achievement is the keynote of the special class of the _____ School. To accomplish this, all instruction is adapted to the needs and abilities of the pupils that an adequate personality may be developed in each child through classroom activities resulting in personal satisfaction and happiness.

This report indicates the pupil's responses as an individual, as a member of this group, and his outstanding achievements.

The teacher will welcome an opportunity to discuss with parents this report and the cumulative record of progress in all activities, which is kept for each pupil in the special class.

[1] Based on report cards used in Schenectady, New York, Donora, Lancaster, and Philadelphia, Pennsylvania.

Form PICA-57
20M—5-38

Commonwealth of Pennsylvania
DEPARTMENT OF PUBLIC INSTRUCTION
Harrisburg

5. APPLICATION FOR THE EXCUSAL FROM PUBLIC SCHOOL OF A CHILD SIXTEEN OR MORE YEARS OF AGE ON GROUNDS OF MENTAL INCAPACITY

Date.....

The Department of Public Instruction
Division of Child Accounting and Research
Harrisburg, Pennsylvania

In accordance with Section 1416 of the School Laws of Pennsylvania application is hereby made for the excusal of ..... as being a child who is unable to profit from further attendance in the public schools. This report was authorized by action of the Board of School Directors of the..... School District, ... County, on..... 19....

Signed .....
Secretary

PSYCHOLOGICAL REPORT

Name .... Grade Attained.....
Address..... City..... County.....
Present Age.....Date of Birth.....Source of Birth Date Information.....
Month Day Year
Father's Name ..... Address..... Phone.....
Mother's Name ..... Address..... Phone.....
Father's Nationality ..... Mother's Nationality .....
Father's Occupation ..... Where Employed .....
Mother's Occupation ..... Where Employed .....

(Continued on next page)

5. Application for the Excusal from Public School of a Child Sixteen or More Years of Age on Grounds of Mental Incapacity—Concluded

Test Results

Date	C. A.		Examination Used	Examined by	Results			
					M. A.		I. Q.	Other
	Years	Mos.			Years	Mos.		

I hereby certify that I have examined and found.....to be unable to profit from further attendance in the public schools, according to the standards prescribed by the State Council of Education.*

*A child chronologically 16 or more years of age with a mental age of less than 10 years, on at least one appropriate, individual mental test or examination at the time he was 16 or more years of age shall be considered as being "unable to profit from further school attendance." A chronological age of 16 shall mean 16 years and no months. A mental age of 10 shall mean 10 years and no months.

Approved .....
Chief, Division of Special Education

Signed .....
Psychologist or Clinic

DEPARTMENT OF PUBLIC INSTRUCTION APPROVAL

This report satisfies the regulations adopted by the State Council of Education, as authorized by Section 1416 of the School Laws of Pennsylvania.

Signed .....
Chief, Division of Child Accounting and Research

(This form will be used in duplicate, one copy to be retained by the school district and the other to be forwarded to the Division of Special Education, Department of Public Instruction, Harrisburg, Pennsylvania.)
PICA-57

Commonwealth of Pennsylvania
DEPARTMENT OF PUBLIC INSTRUCTION
Harrisburg

6. REPORT OF CHILDREN SIXTEEN OR SEVENTEEN YEARS OF AGE PERMANENTLY EXCUSED ON BASIS OF MENTAL INCAPACITY

.....School District..... County..... Date

to

Division of Child Accounting and Research
Department of Public Instruction
Harrisburg, Pennsylvania

The following public school children over sixteen years of age have been excused from further attendance on the basis of the provisions of Act 478 amending Section 1416 of the School Laws of Pennsylvania under standards prescribed by the State Council of Education.

A child chronologically 16 or more years of age with a mental age of less than 10 years, on at least one appropriate, individual mental test or examination at the time he was 16 or more years of age shall be considered as being "unable to profit from further school attendance." A chronological age of 16 shall mean 16 years and no months. A mental age of 10 shall mean 10 years and no months.

Superintendent of Schools

No.	NAME OF CHILD		NAME OF SCHOOL	Chronological Age at Time of Examination		Mental Age at Time of Examination		Grade Attained at Time of Excusal	Date of Excusal
	Last Name	First Name		Yrs.	Mos.	Yrs.	Mos.		
1									
2									
3									
4									

PICA-58 (Space provided for 75 names)

(Obverse)

THIS COPY IS TO BE SENT TO THE DIVISION OF SPECIAL EDUCATION, DEPARTMENT OF PUBLIC INSTRUCTION, HARRISBURG, PENNSYLVANIA.

Commonwealth of Pennsylvania
DEPARTMENT OF PUBLIC INSTRUCTION
Harrisburg

7. Report to the Department of Welfare Concerning an Uneducable Child

The Bureau of Mental Health
Department of Welfare
Harrisburg, Pennsylvania

Date .....

In accordance with Section 1413 of the School Laws of Pennsylvania.....is hereby reported to the Department of Welfare as being a child who is uneducable in the public schools. This report was authorized by action of the Board of School Directors of the.....School District, ... County, on..... 19.....

Signed .....
Secretary

PSYCHOLOGICAL REPORT

Name ..... Date.....

Address ..... City..... County.....

Present Age ..... Date of Birth..... Source of Birth Date Information.....
Month Day Year

Father's Name .....Address..... Phone.....

Mother's Name .....Address..... Phone.....

Father's Nationality .....Mother's Nationality .....

Father's Occupation .....Where Employed .....

Mother's Occupation .....Where Employed .....

Birth Conditions (Describe any unusual facts) .....

.....

(Continued on next page)

7. Report to the Department of Welfare Concerning an Uneducable Child—Continued

.....

.....

Infancy: Age of First Walking..... First Talking..... First Teething.....

Health History .....

.....

.....

.....

Present Physical Condition .....

.....

.....

.....

Symptomatic Behavior .....

.....

.....

.....

.....

Home Conditions .....

.....

.....

.....

PISE-7
25M—9-37

(This form is used in triplicate.)

7. Report to the Department of Welfare Concerning an Uneducable Child—Continued (Reverse)

School Progress—Age at First Admission.....

School Year	Grade Placement	Quality of School Work	Attendance (Number of Days Absent and Reasons)	School
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

(Continued on next page)

7. Report to the Department of Welfare Concerning an Uneducable Child—Concluded

Test Results

Date	C. A.	Examination Used	Examined by	Results		
				M. A.	I. Q.	Other

I hereby certify that I have examined and found.....to be uneducable in the public schools, according to the standards prescribed by the State Council of Education.

Signed .....
Psychologist or Clinic

DEPARTMENT OF PUBLIC INSTRUCTION APPROVAL

This report satisfies the regulations adopted by the State Council of Education, as authorized by Section 1413 of the School Laws of Pennsylvania.

Signed .....
Chief, Division of Special Education

.....

Date Received..... Date Approved.....Date Transmitted to the Department of Welfare.....

Date Action Reported to the School Board.....Disposition of the Case .....

.....

.....

.....

D. EQUIPMENT AND SUPPLIES

1. Minimal Equipment

The following statement contains a minimum list of equipment for a single mentally retarded class; a statement of general classroom supplies; suggestive additional mentally retarded classroom equipment, not necessary but desirable; and tools and materials for handicrafts usually taught to the mentally retarded.

Regular Equipment—

Eighteen substantial tables

Maximum top measurements 24″ x 36″; tables may be of uniform size, and legs shortened to accommodate physical development of pupils. If supplied without boxing, tables can be nested, provided top measurements and heights vary sufficiently. "Nesting" of tables provides more space for physical activities.

Measurements that permit "nesting":

Height	*Top*
22 inches	26 x 18 inches
24 inches	30 x 20 inches
26 inches	34 x 22 inches
28 inches	38 x 24 inches
30 inches	42 x 26 inches

Twenty strong, well-made chairs

Suggested heights for chairs: 12 inches, 13½ inches, 15 inches, 16½ inches, and 18 inches.

Rubber tips or "domes of silence" on all legs.

	SPECIAL EQUIPMENT—	Approximate Cost
1	Filing cabinet, four drawer, letter size	$15.00
1	Library table, square or round	12.00
1	Long work table	14.00
1	Woodworking bench 52 inches long equipped with two (2) direct acting vices	25.00
1	Carpet loom, foot power, 2 harness $35.00	
	4 harness	50.00
1	Rectangular loom for hooked rugs. (Classroom made)	—
1	Needle for hooking rugs	1.00
*1	Large supply closet	15.00
*18	Bins for pupils' unfinished handwork	10.00
*1	Paint cabinet—(metal lined box or tin box or can)	2.00
*1	Tool closet	5.00
*1	Paint table—metal top	8.00
1	Sewing machine—foot power	30.00 or less
1	Victrola	15.00 or less
1	Hand printing outfit—large type for flashcards	2.50
1	Hectograph	3.50
1	Galvanized tub for soaking reed and cane	1.00
1	Card cutter, 15-inch blade	9.75

* If these articles are sold or made locally, the price will be considerably less.

1	Eyelet punch	2.00
3	Small desk looms, 9 inches by 12 inches, rods and needles	1.50
3	Rake knitters, 11 inches diameter	2.70
18	Pairs of scissors, (some with pointed ends)	5.00
1	Pair of large shears for the teachers	1.00
12	Coping saws with ratchet, 4½-inch swing, 75c each	9.00
6	Dozen coping saw blades—15c dozen	.90
1	Cross cut saw, 9 point, 20 inches or 22 inches long	2.50
1	Rip saw, 8 point, 20 inches or 22 inches long	2.50
1	Back saw, 10 inches long	2.00
1	Compass saw	.85
2	Planes, (1 jack plane and 1 block plane)	6.00
3	Hammers of different sizes, brad claw	3.00
3	Chisels: ¼ inch, ½ inch, 1 inch—75c each	2.25
3	Files: 1 wood rasp, 1 fine wood, 1 fine rat tail	1.00
1	Pair cutting pliers	1.50
2	Screw drivers, 1 large, 1 small .....40c each	.80
1	Brace 8-inch sweep and outfit of 6 bits, ¼ inch-1 inch	6.00
1	Rose countersink for setting screws	.25
1	Try square	1.00
1	Mallet, wooden, round face, 2½ inches diameter	1.00
1	Nail set, 1/16-inch opening	.15
1	Marking gauge	.75
1	Small automatic push drill with set of drills	.90
1	Sloyd knife	.50
1	Set 6-inch hand wood carving tools	2.75
1	Oil stone	1.50
1	Boxwood folding rule	1.00
6	Paint brushes, 1-inch flat—1½-inch flat	1.50
1	Dust pan	.25
1	Dust brush	.75
1	Floor brush	1.50
6	Bench hooks (classroom made)	—
6	Coping saw blocks (classroom made)	—
6	"C" Clamps for attaching coping saw blocks to table	1.00
1	Electric soldering iron	1.00
1	Pair tin snips	1.25
1	Mitre box—(classroom made)	
3	Waffle weaving frames @ 20c	.60
3	Spool knitters—(classroom made)	—
		$286.90

Prices quoted are neither the highest nor the lowest, but average for standard materials that should give, under ordinary conditions, satisfactory service.

2. Minimal Classroom Supplies

Craft Supplies

The following suggested materials may be ordered in advance of the opening of a special class in order that manual activities may be started on the first day of school. After the special teacher has had an opportunity to observe the abilities of the pupils, she will no doubt order additional supplies to meet particular pupil needs.

Weaving Materials

1. Germantown wool, for rake knitting and cardboard loom weaving:

2 ounces—Brown
2 ounces—Tan
2 ounces—Dark blue
2 ounces—Red
2 ounces—Dark green
2 ounces—Orange

2. Carpet warp and filler for floor loom weaving.
   30 balls (½ pound each) Carpet warp—white, tan or neutral shade.
   10 pounds filler (2 pounds each) dark blue, brown, dark green, orange, variegated. (½ pound each) white, black.
   10 pounds carpet rags.

3. Spooled warp and filler, if a table loom is ordered.
   Spools of Eyptian cotton (number will depend on size of loom).
   1 tube 3/24 Egyptian cotton, natural
   6 skeins No. 5 pearl cotton:
   1 skein—dark blue
   1 skein—dark red
   1 skein—light blue
   1 skein—jade green
   1 skein—yellow
   1 skein—dark green

4. Raffia
   1 bundle of raffia, assorted colors

Rug Hooking Materials

2 burlap rug patterns
10 pounds wool carpet "thrums"

Sewing Equipment

1 package No. 10 Crewel needles
1 package pins
2 spools thread (white and black)
6 thimbles
2 yards gingham
6 yards Huck toweling

Woodworking Materials

Lumber:—10 feet—¼ inch poplar 12 inches wide
10 feet—⅜ inch poplar 12 inches wide
10 feet—½ inch poplar 12 inches wide

Nails and screws:—1 pound nails ½ inch—No. 19
1 pound nails ¾ inch—No. 18
1 pound nails 1 inch—No. 18
1 box ½ inch screws, flat heads
1 box 1 inch screws, flat heads
1 box ½ inch finishing screws
1 box 1 inch finishing screws

Sandpaper:—12 sheets—No. 1
12 sheets—No. 00

Paints—¼ cans of enamel:—chinese red
jade green
leaf green
lettuce green
yellow
orange
black
white
light blue
dark blue
brown

½ pint can mahogany oil stain
½ pint can walnut oil stain
1 quart white shellac
1 gallon turpentine
1 tube glue

Brushes:—6—No. 8 water color brushes
6—No. 2 water color brushes
6—¾ inch flat brushes

General Classroom Supplies

Classrooms for the mentally retarded should also be equipped with the following:

Chalk, colored and white
Crayons, wax, assorted colors
Envelopes, manila, 10 x 13—for seat work
Eyelets—to use with eyelet punch
Glue, liquid
Ink—India
Printing
Printing ink pads for stick printing

Paper, carbon
- Construction, assorted colors, 9 x 12
- Cross section, ½ inch blocks, 9 x 12
- Drawing, manila
- Engine, assorted colors, 9 x 12
- Tablets, for pencil use
- Weaving mats and fringes (Kindergarten)

Fasteners, brass, paper (two prongs)
Clips, paper
Oak tag, sheets 22 x 28 for posters and flash cards
- Packages 9 x 12

Paste, library
Pencils
- Heavy lead, for young children
- Regular size for ordinary use
- Hectograph

Pencil sharpener
Seals, gummed (stars, flags, etc.)
Thermometer
Thumb tacks
Towels, paper
Water colors—boxes of four colors
- Cakes, red, blue, yellow, charcoal gray
- Cups
- Brushes, camel hair

Word builders, (boxes of letters)

SUGGESTED ADDITIONAL EQUIPMENT AND SUPPLIES

Abacus
Balls, rubber
Beads, kindergarten, assorted colors and shapes
Blocks, word and number building
- kindergarten building

Book cases, made locally
Bulletin board, made locally
Cabinet, first aid
Clay, modeling
Clock dial
Closet, corner, long chest or shelf, for reed and cane, made locally
Counting boxes with paper numerals—made by teacher
Cubes, color
Cut-out wooden letters
Denominate number apparatus and cabinet
Dishes, cutlery, and cooking utensils
Dominoes

Educational toy money
Hot plate, two burner, gas or electric
Iron, gas or electric
Ironing board
Musical instruments for rhythm work
Peg boards, primary
Pictures, suitable
Puzzles, made by pupils
Rack or shelf for lumber
Sand paper letters, made by teacher
Sand table and sand for same
Scales, weighing capacity 25 pounds
Shelf—base of heavy meshed wire for drying freshly painted articles
Shelves or cabinets for display purposes
Shoe-strings, round, for stringing kindergarten beads
Straws, wooden, assorted lengths and colors, 1 inch to 5 inches

3. Suggested Additional Handicraft Tools and Materials

Basketry Equipment (order sparingly, if at all.)

Tools
Awls
Bending pliers
Cutting pliers
Diagonal side cutting pliers
Flat nose pliers
Round nose pliers

Materials
Reed, flat ¼ inch
Reed, round, Nos. 0 to 7
Basket and tray bases
Raffia, assorted colors, ¼ pound lots

Block Printing Equipment

Tools
Bench hook
Letter press or clothes wringer
Linoleum carving tools
Brayer
Window glass, 8 inches by 10 inches

Materials
Adhesive tape
Carbon paper
Designs
Flat white paint
India ink
Linoleum
Paper, unbleached muslin or other material
Printers ink

Bookbinding Equipment

Tools	Scissors
	Needles
	Rulers
Materials	Cardboard (tablet backs)
	Bookbinders linen (vellum)
	Linen thread (heavy)
	Paste
	Paste brushes
	Cover paper
	Unprinted newspaper or manila paper for leaves
	Newspapers, old, for pasting process

Brushmaking Equipment

Tools	Work bench and vise
Materials	Fibre, assorted lengths and colors
	Backs and handles
	Roving (soft brushes)
	Wire, copper, light and heavy

Chair Seating Supplies

Tools	Awl
	Pliers
	Wooden pegs, hand made
Materials	Flat reed, ¼ inch
	Cane, fine
	medium
	binding
	Fibre, rainbow
	Frames, for stools and chairs

Leathercraft Equipment

Tools	Special spacing guage spring punch No. 0
	Eyelet punch
	Drive punches No. 0, No. 1
	Snap fastener
	Modeling tools
	Background stamping tools
	Maple punching board about 12 inches by 15 inches
	Wooden mallet
	Awl
	Shears
Materials	Non-tooling leather remnants, assorted colors, sold "as is"
	Lining leather remnants, assorted colors, sold "as is"
	Tooling leather remnants, assorted colors, sold "as is"

Leather or rubber cement
Snaps or fasteners
Eyelets
Lacing, black 3/32 inch goat skin, colored 3/32 inch calf skin

Linoleum Carving Equipment (Plaques)

Tools
Bench hook
Linoleum carving tools

Materials
Designs
Enamel paints
Linoleum remnants

Metalcraft Equipment

Tools
Alcohol lamp
Ball peen hammer (2 sizes)
Chain pliers
Coping saw block
Dapping die
Files—large and small
Hand drill and drill points
Horn mallet
Jeweler's saw frame and blades
Pliers, round nose
Shears, tin, straight blades
Shears, tin, curved blades

Materials
Alcohol
Copper, No. 16, No. 18
Patterns
Pumice, powdered
Pewter, 16 gauge, discs
Wooden molds for plates, bowls
Wooden mallets

Needlecraft Equipment

Tools
Darners, for darning stocking
Needles
Assorted sizes, for sewing
Blunt, for weaving
Crocheting, assorted sizes, steel, bone, and wood
Knitting, assorted sizes
Pins, common
Sewing cards
Shears, cutting, assorted sizes
Tape measures
Thimbles, assorted sizes
Yard stick

Materials
- Binding tape, bias,—box of assorted colors
- Burlap, basket weave
- Brass rings, ½ inch and ¾ inch diameter
- Cotton
  - Sewing, black and white, Nos. 40, 50, and 60
  - Crochet, white, ecru
  - Pearl, for embroidery and weaving
  - Silkateen, embroidery and weaving
  - Darning, assorted shades
  - D. M. C. embroidery cotton, assorted colors
- Crash, linen for towels
- Gingham, checked, assorted colors
- Huckaback, for towels
- Muslin, unbleached for "Crayonexing," etc.
- Oil cloth, assorted plain colors, for toys, etc.
- Scrim, for net weaving
- Yarn, wool, for net weaving
- Stamped patterns for embroidery
- Net, cross stitch, coarse
- Crepe paper, assorted shades and colors
- Mill remnants of cotton and silk

Rug Hooking Equipment

Tools
- Rectangular, adjustable frames
- Hooking needles

Materials
- Burlap patterns
- Stocking roundings from hosiery mills
- Remnants from lingerie mills
- Wool thrums from carpet mills
- Dyes for dyeing stocking roundings

Shoe Repairing Equipment

Tools
- 1 Cabinet or box for shoe repairing equipment (made by pupils)
- 1 Kindergarten chair
- 1 Iron standard
- 1 Set of tacks—assorted sizes, A, B, C, D
- 1 Shoe hammer
- 1 9 inch rasp
- 1 Knife sharpener
- 1 Stab awl, adjustable
- 1 Pail pulling-off nippers
- 1 Pair cutting nippers
- 1 Carved lip knife
- 1 4 inch trimming knife (straight)
- 1 Nail set
- 1 Burnishing iron

Materials
- Leather soles, boy's (pairs)
- Leather soles, girl's (pairs)
- Rubber heels, boy's (pairs)
- Rubber heels, girl's (pairs)
- Assorted clinch nails, No. 4/8, No. 5/8
- Wooden shoe pegs
- Bristles
- Linen thread
- Shoemaker's wax
- Heel balls
- Heel plates, assorted (pairs)
- Patching leather, black, brown
- Leather, for heel lifts
- Cement, rubber
- Ink, black, brown
- Shoe laces, black, brown
- Polish, shoe, black, brown

Tin Can Toy Construction

Tools
- Can opener
- Compass
- Cutting pliers
- Dividers
- Drill and drill points
- Electric soldering iron
- Files—large and small
- Iron pipe, several sizes, for shaping tin
- Steel vice for bending and folding tin
- Tin snips, small and large
- Wooden mallet

Materials
- Acid solder
- Enamel paint
- Steel wool
- Tin bottle tops—all varieties
- Tin cans
- Tin scrap from local tinsmiths

Weaving Equipment (rugs, mats, caps, bags, etc.)

Tools
- Desk looms
- Colonial mat frames
- Toy knitters for spool knitting
- Slats, white and colored, for weaving on oil cloth mats
- Looms, cardboard
- Scarf and pillow loom—4 harness, table, handpower

Materials
- Yarn, Germantown, assorted colors
- Yarn, Craft, assorted colors
- Yarn, weaving, assorted colors

Yarn, Thrums, wool, sold "as is" (carpet mills)
Yarn, Thrums, worsted, sold "as is" (carpet mills)
Yarn, Saxony
Cotton, knitting, Nos. 10, 12, 14
Cotton, crochet, mercerized, No. 5
Carpet rags
Roving, assorted colors
Jute, assorted colors
Carpet warp, assorted colors, ½ pound spools
Perle cotton, assorted colors and sizes

Woodworking Equipment (additional)

Tools
Auger, bit, extension
Awl, scribe
Compass, 8 inches
Electric glue pot
Knives, jack, putty
Pincers, carpenter
Ruler, steel edge, 1½ inches wide by 15 inches long
Saw, electric band, medium size, 18 inches
Saw, combination compass
Saw, jig or fret, foot power
Saw, jig or fret, motor power
Scrapers
Wrench, monkey

Materials
Alcohol, denatured
Cotter pins, ⅛ x 2½ inches
1/16 x 1¼ inches
1/16 x 1½ inches
Cotton waste
Emery cloth
Enamel, white, assorted colors
Glue
Lumber—Basswood—¼ S2S
⅜ S2S
½ S2S
Chestnut ½ S2S
1 S2S
2 x 2 S4S
Pine 1 S2S
2 x 2 S4S
Poplar ¼ S2S
⅜ S2S
½ S2S
Gum ¼ S2S
⅜ S2S
½ S2S

Dowels 1/4, 5/16, 3/8, 1/2, 7/8 . . birch or poplar
Machine, oil and linseed
Nails—flathead, wire
four penny
six penny
eight penny
brads, assorted sizes
tacks
Oil paints, assorted colors
Pumice stone, powdered
Putty
Sand paper, No. 00, 0, 1/2, 1, 1 1/2
Screws—assorted sizes
Shellac, orange
white
Stains, oak, cherry, mahogany, green oak
Steel wool
Turpentine
Varnish, clear
Wax, prepared
White lead
Wood filler, prepared, light

E. SOURCES OF HANDICRAFT TOOLS AND MATERIALS

The following list contains the names of commercial houses that have come to the attention of the Division of Special Education, Department of Public Instruction, as handling furniture, tools, and materials of interest to school officials organizing special classes and to special class teachers. The list is not complete; it is not intended to be preferential, but to be helpful in giving information as to sources of equipment and supplies that are out of the ordinary.*

BASKETRY MATERIALS (Reed, Raffia, Cane, etc.)

American Rattan and Reed Manufacturing Company, Station G., New York City
American Reedcraft Corporation, 130 Beekman Street, New York City
Beckley Cardy Company, Chicago, Illinois
Crafts Supply Company, The, 207 West Sixteenth Street, New York City
Dobson-Evans Company, Columbus, Ohio
Edward E. Babb Company, Philadelphia, Pennsylvania
J. L. Hammett Company, Newark, New Jersey
Kurtz Brothers, Clearfield, Pennsylvania
Magnus Brush and Craft Materials, Wakefield, Massachusetts
Milton Bradley Company, Philadelphia, Pennsylvania
National Crafts Supply Company, 94 Lexington Avenue, New York City

* Teachers of the mentally retarded are requested to send, from time to time, additional information as to sources of satisfactory tools and materials to the Division of Special Education, Department of Public Instruction, Harrisburg, Pennsylvania.

Talens School Products, Inc., New York City
Universal School of Handicrafts, R.K.O. Building, New York City
Waldcraft Company, Indianapolis, Indiana

BEADCRAFT SUPPLIES

Crafts Supply Company, The, 207 West Sixteenth Street, New York City
Dwinnell Craft Shop, Elm Grove, Wheeling, West Virginia
Eitinger Bead Company, Inc., 36 West Thirty-seventh Street, New York City
Elliot, Greene and Company, 15 West Thirty-seventh Street, New York City
Fellowcrafters, 64 Stanhope Street, Boston, Massachusetts
Handcrafters, The, Waupun, Wisconsin
Hobby Craft Store, 62 West 45th Street, New York City
National Crafts Supply Company, 94 Lexington Avenue, New York City
Talens School Products, Inc., New York City
Universal School of Handicrafts, R.K.O. Building, New York City
Walco Bead Company, The, 37 West Thirty-seventh Street, New York City

BLOCK PRINTING MATERIALS (See Linoleum Carving)

BOOKBINDING MATERIALS

Edward E. Babb Company, Philadelphia, Pennsylvania
J. L. Hammett Company, Newark, New Jersey
Milton Bradley Company, Philadelphia, Pennsylvania
Roberts and Meck, Harrisburg, Pennsylvania
Talens School Products, Inc., New York City
Williamsport Printing and Binding Company, Williamsport, Pennsylvania

BRAIDING AND KNITTING MATERIALS

Fellowcrafters, 64 Stanhope Street, Boston, Massachusetts
Handcrafters, The, Waupun, Wisconsin
Magnus Brush and Craft Materials, Wakefield, Massachusetts
Universal School of Handicrafts, R.K.O. Building, New York City

BRUSHMAKING MATERIALS

Joseph O. Flatt Company, 137 Cedar Street, Reading, Pennsylvania
Magnus Brush and Craft Materials, Wakefield, Massachusetts
Ox Fibre Company, The, New York City
Vivack Company, The, 486 Grand Street, New York City
Walles Supply Company, Erie, Pennsylvania

CHAIR SEATING SUPPLIES (See Basketry Materials)

CORK

Local automobile supply houses
Handcrafters, The, Waupun, Wisconsin
Magnus Brush and Craft Materials, Wakefield, Massachusetts

CROCHETING MATERIALS (See Weaving, etc.)

DECALCOMANIAS (See Silhouettes)

FELT

Magnus Brush and Craft Materials, Wakefield, Massachusetts

FURNITURE FRAMES

Handcrafters, The, Waupun, Wisconsin
Magnus Brush and Craft Materials, Wakefield, Massachusetts

HARNESSES AND HEDDLES (for Floor Looms)

Steel Heddle Manufacturing Company, 2100 West Allegheny Avenue, Philadelphia, Pennsylvania
(Additional harnesses and heddles may be purchased from the above company to increase the number of harness and heddles of floor looms.)

HOOKED RUGS (Frames, Designs, Tools, and Materials)

American Reedcraft Corporation, 130 Beekman Street, New York City
Art Crafts Industries, 66 Church Street, Cambridge, Massachusetts
Bernhard Ulmann Company, Inc., 107-113 Grand Street, Station S, New York City
Bucilla Company, The, New York City
Colonial Crochet Links, Charlotte, North Carolina, ("Looper Clips" or "Stocking Roundings")
Crafts Supply Company, The, 207 West Sixteenth Street, New York City
Emile Bernat and Sons Company, 89-99 Bickford Street, Jamaica Plain, Massachusetts
Magnus Brush and Craft Materials, Wakefield, Massachusetts
National Crafts Supply Company, The, 94 Lexington Avenue, New York City
Pepperell Braiding Company, East Pepperell, Massachusetts
Thayer and Chandler, 913 Van Buren Street, Chicago, Illinois
Vaughan Knitting Mills, Pottstown, Pennsylvania, ("Looper Clips" or "Stocking Roundings")
M. J. Whittall Associates, Ltd., Worcester, Massachusetts, (Wool and Worsted Thrums)
William H. Horstmann Company, Philadelphia, Pennsylvania

KNITTING MATERIALS (See Weaving, etc.)

LEATHERCRAFT TOOLS AND SUPPLIES

American Handicrafts Corporation, New York City
Brodhead-Garrett Company, Cleveland, Ohio
Charles A. Toebe, 149 North Third Street, Philadelphia, Pennsylvania
Crafts Supply Company, The, 207 West Sixteenth Street, New York City
Dwinnell Craft Shop, Elm Grove, Wheeling, West Virginia
Fellowcrafters, 64 Stanhope Street, Boston, Massachusetts
Handicraft Leather and Supply House, Rochester, New York
Harvey Anderson Leather Company, Brockton, Massachusetts
Hobby Craft Stores, 62 West 45th Street, New York City
Lester Griswold, Colorado Springs, Colorado
Magnus Brush and Craft Materials, Wakefield, Massachusetts (Leather belt links)
M. Loeffler, 99 Liberty Street, Bloomfield, New Jersey (Tools)

National Crafts Supply Company, The, 94 Lexington Avenue, New York City
Osborn Brothers Supply Company, Inc., Chicago, Illinois
Talens School Products, Inc., New York City
Universal School of Handicrafts, R.K.O. Building, New York City
W. A. Hall, 99 Bedford Street, Boston, Massachusetts
Waldcraft Company, The, Indianapolis, Indiana
Wilder and Company, Chicago, Illinois
William Dixon, Inc., Newark, New Jersey

LINOLEUM AND WOODCARVING TOOLS AND BLOCK PRINTING SUPPLIES

Alfred Field and Company, 93 Chambers Street, New York City (Tools)
American Handicrafts Corporation, New York City
Brodhead-Garrett Company, Cleveland, Ohio
Dwinnell Craft Shop, Elm Grove, Wheeling, West Virginia
Edward E. Babb Company, Philadelphia, Pennsylvania
Fellowcrafters, 64 Stanhope Street, Boston, Massachusetts
Hobby Craft Store, 62 West 45th Street, New York City
Hunt Pen Company, Camden, New Jersey
J. L. Hammett Company, Newark, New Jersey
J. R. Holcomb Company, 1518 St. Clair Avenue, Cleveland, Ohio
Kurtz Brothers, Clearfield, Pennsylvania
Milton Bradley Company, 401 North Broad Street, Philadelphia, Pennsylvania
National Crafts Supply Company, The, 94 Lexington Avenue, New York City
O. P. Craft Company, Incorporated, The, Sandusky, Ohio
Polar Manufacturing Company, 401 North Broad Street, Philadelphia, Pennsylvania (Linoleum scrap)
Talens School Products, Inc., New York City
Universal School of Handicrafts, R.K.O. Building, New York City
Waldcraft Company, The, Indianapolis, Indiana

LOOMS

A.B.C. Cardboard Weaving Looms
J. L. Hammett Company, Newark, New Jersey
Apache Bead Looms
J. L. Hammett Company, Newark, New Jersey
Artcraft Structo Four Harness Table Looms
Art Craft Industries, Cambridge, Massachusetts
Brodhead-Garrett Company, Inc., Cleveland, Ohio
J. L. Hammett Company, Newark, New Jersey
Structo Manufacturing Company, Freeport, Illinois
Universal School of Handicrafts, R.K.O. Building, New York City
Braid Weave Looms
Art Craft Industries, Cambridge, Massachusetts
J. L. Hammett Company, Newark, New Jersey
Bernat Four Harness Table and Floor Looms
Universal School of Handicrafts, R.K.O. Building, New York City

Cambridge Four Harness Floor Looms
Garden City Educational Company, Chicago, Illinois
J. L. Hammett Company, Newark, New Jersey

Card Weaving Cards
Handcrafters, The, Waupun, Wisconsin
Universal School of Handicrafts, R.K.O. Building, New York City

Colonial Mat Frames
J. L. Hammett Company, Newark, New Jersey

Constantine Loom (Upright Floor Loom)
Milton Bradley Company, Philadelphia, Pennsylvania

Cromaine Four Harness Floor Looms
Brodhead-Garrett Company, Inc., Cleveland, Ohio
Universal School of Handicrafts, R.K.O. Building, New York City

Easiweare Looms
Kate Van Cleve, 165 Newberry Street, Boston, Massachusetts

Easiweave Pin and Peg Weaving Frames
Fellowcrafters, 64 Stanhope Street, Boston, Massachusetts

Easy Weave Rug Loom (Hand)
Easy Weave Looms, 125 West Thirty-third Street, New York City

Fairbault Weaving Frame
Milton Bradley Company, Philadelphia, Pennsylvania

Fellowcrafters Two Harness Table Looms
Fellowcrafters, 64 Stanhope Street, Boston, Massachusetts

Hammett Four Harness Looms
J. L. Hammett Company, Newark, New Jersey
Universal School of Handicrafts, R.K.O. Building, New York City

Ideal Two Harness Floor Loom
Artcraft Industries, Church Street, Cambridge, Massachusetts
C. A. Reed Company, Springfield, Ohio
Garden City Educational Company, Chicago, Illinois
J. L. Hammett Company, Newark, New Jersey
Milton Bradley Company, Philadelphia, Pennsylvania

Lezur Two Harness Table Loom
Brodhead-Garrett Company, Inc., Cleveland, Ohio
Universal School of Handicrafts, R.K.O. Building, New York City

Little Dandy Two Harness Floor Loom
(From firms selling the Ideal Loom)

McKay Four, Six, and Eight Harness Looms
Universal School of Handicrafts, R.K.O. Building, New York City

Peacock Loom
Handcrafters, The, Waupun, Wisconsin

Practical Four Harness Loom
Artcraft Industries, Cambridge, Massachusetts

Progressive Two and Four Harness Table and Hand Looms
Waldcraft Company, The, Indianapolis, Indiana

Rake Knitting Frames (straight and circular)
J. L. Hammett Company, Newark, New Jersey
Universal School of Handicrafts, R.K.O. Building, New York City

Reed Macomber Floor Looms (Ad-a-Harness)
Fellowcrafters, 64 Stanhope Street, Boston, Massachusetts
Universal School of Handicrafts, R.K.O. Building, New York City
Tapestry Looms
Universal School of Handicrafts, R.K.O. Building, New York City
Todd Hand Looms
J. L. Hammett Company, Newark, New Jersey
Tyndall Hand Looms
Milton Bradley Company, Philadelphia, Pennsylvania
Universal Peg (Hand) Loom
Universal School of Handicrafts, R.K.O. Building, New York City
Universal Two Harness Table Looms
Universal School of Handicrafts, R.K.O. Building, New York City
Waffle Mat Frames
Fellowcrafters, 64 Stanhope Street, Boston, Massachusetts
Handcrafters, The, Waupun, Wisconsin
Weave-it Looms
J. L. Hammett Company, Newark, New Jersey
Kiddycrafters, Medford, Massachusetts
Milton Bradley Company, Philadelphia, Pennsylvania
Universal School of Handicrafts, R.K.O. Building, New York City
Weave-rite Loom (Hand)
J. L. Hammett Company, Newark, New Jersey

METAL CRAFTS TOOLS AND MATERIALS

American Handicrafts Corporation, New York City (Jewelry and metal working tools)

Bechtel, George H. Company, Sansom Street, Philadelphia, Pennsylvania
Brodhead-Garrett Company, Inc., Cleveland, Ohio

Bessie T. Cram, 175 Prospect Street, Cambridge, Massachusetts (wooden molds)

Fellowcrafters, 64 Stanhope Street, Boston, Massachusetts
Handy and Harmon, New York City (Sterling silver and other metals)
Hobby Craft Store, 62 West 45th Street, New York City

Herre Brothers, Seventh and Emerald Streets, Harrisburg, Pennsylvania (Copper)

Lester Griswold, Colorado Springs, Colorado (Silversmithing materials)
Metal Crafts Supply Company, Providence, Rhode Island
National Crafts Supply Company, The, 94 Lexington Avenue, New York
Patterson Brothers, 27 Park Row, New York City
Talens School Products, Inc., New York City

T. B. Hagstoz and Son, 709 Sansom Street, Philadelphia, Pennsylvania (Sterling silver)

Universal School of Handicrafts, R.K.O. Building, New York City
White Metal Rolling and Stamping Company, Brooklyn, New York (Pewter)
William Dixon, Inc., Newark, New Jersey
Wrot Iron Designers, New York City

METAL TOOLING MATERIALS

Fellowcrafters, 64 Stanhope Street, Boston, Massachusetts
Magnus Brush and Craft Materials, Wakefield, Massachusetts
Universal School of Handicrafts, R.K.O. Building, New York City

MODEL (GROCERY) STORE

Educational Foundations, 19 Flatbush Avenue, Brooklyn, New York

NEEDLECRAFT (See Weaving, Crocheting, Knitting, and Embroidery)

PLASTER OF PARIS CASTING

Stuart Studios, 2927 Wilcox Street, Chicago, Illinois (Liquid Rubber)

POTTERY TOOLS AND MATERIALS

Brodhead-Garrett Company, Inc., Cleveland, Ohio
Fellowcrafters, 64 Stanhope Street, Boston, Massachusetts
J. L. Hammett Company, Newark, New Jersey .
Magnus Brush and Craft Materials, Wakefield, Massachusetts
Talens School Products, Inc., New York City
Universal School of Handicrafts, R.K.O. Building, New York City

PUPPETRY MATERIALS

Fellowcrafters, 64 Stanhope Street, Boston, Massachusetts
Universal School of Handicrafts, R.K.O. Building, New York City
Talens School Products, Inc., New York City

PYROGRAPHY MATERIALS

Fellowcrafters, 64 Stanhope Street, Boston, Massachusetts
Magnus Brush and Craft Materials, Wakefield, Massachusetts
Universal School of Handicrafts, R.K.O. Building, New York City

REED, RAFFIA, CANE (See Basketry Materials)

SCHOOL ARTS MATERIALS (Burlap, Canvas, Designs, Notions, etc.)

American Crayon Company, 1706 Hayes Avenue, Sandusky, Ohio
American Reedcraft Corporation, 130 Beekman Street, New York City
Art Craft Industries, 66 Church Street, Cambridge, Massachusetts
Craft Supply Company, The, 207 West Sixteenth Street, New York City
Edward E. Babb and Company, Philadelphia, Pennsylvania
Elson Art Publishing Company, Belmont, Massachusetts (Pictures)
E. Steiger and Company, 49 Murray Street, New York City (Kindergarten Materials)
F. A. Owen Publishing Company, Dansville, New York
Kurtz Brothers, Clearfield, Pennsylvania
Magnus Brush and Craft Materials, 604 West Lake Street, Chicago, Illinois
National Crafts Supply Company, The, 94 Lexington Avenue, New York City
Pepperell Braiding Company, East Pepperell, Massachusetts
Prang Company, The, New York City

R. A. Fife Corporation, Mamaroneck, New York
Tea Tile Manufacturing Company, The, Newton, Iowa
Thayer and Chandler, 913 West Van Buren Street, Chicago, Illinois
Waldcraft Company, The, Indianapolis, Indiana

SEWING (See Weaving, Crocheting, Knitting, and Sewing Materials)

SHOE REPAIRING

Charles A. Toebe, 149 North Third Street, Philadelphia, Pennsylvania
Cosica Brothers, 110 Market Street, Pittsburgh, Pennsylvania

SILHOUETTES AND DECALCOMANIAS

American Reedcraft Corporation, 130 Beekman Street, New York City
Fellowcrafters, 2 Perkins Square, Jamaica Plain Station, Boston, Massachusetts
Meyer Cord Company, The, 120 South LaSalle Street, Chicago, Illinois
National Decalcomania Corporation, 236 North 60th Street, Philadelphia, Pennsylvania

SYNTHETIC AMBER

Fanwood Specialties Company, Fanwood, New Jersey "Catalin"
Fellowcrafters, 64 Stanhope Street, Boston, Massachusetts "Amberol"
Magnus Brush and Craft Materials, Wakefield, Massachusetts "Korelin"
Universal School of Handicrafts, R.K.O. Building, New York City "Synthetic Amber"

WEAVING, CROCHETING, KNITTING, SEWING, AND EMBROIDERY MATERIALS

Carpet Warp and Filler

Carlscraft Company, Boonville, New York
Crafts Supply Company, The, 207 West Sixteenth Street, New York City
Edward E. Babb Company, Philadelphia, Pennsylvania
January and Wood, Marysville, Kentucky
J. L. Hammett Company, Newark, New Jersey
Milton Bradley Company, Philadelphia, Pennsylvania
Reed Manufacturing Company, Springfield, Ohio
Sears-Roebuck Company, Philadelphia, Pennsylvania
Tinkler and Company, 527 Arch Street, Philadelphia, Pennsylvania
Waldcraft Company, The, Indianapolis, Indiana

Fibre

Handcrafters, The, Waupun, Wisconsin
Magnus Brush and Craft Materials, Wakefield, Massachusetts

Jute

Crafts Supply Company, The, 207 West Sixteenth Street, New York City
Edward E. Babb Company, Philadelphia, Pennsylvania
J. L. Hammett Company, Newark, New Jersey

Ludlow Manufacturing Associates, Boston, Massachusetts
Milton Bradley Company, Philadelphia, Pennsylvania
Tinkler and Company, 527 Arch Street, Philadelphia, Pennsylvania
Waldcraft Company, The, Indianapolis, Indiana

Spooled Warp

Emile Bernat and Sons Company, Jamaica Plain, Massachusetts
Structo Manufacturing Company, Freeport, Illinois
Waldcraft Company, The, Indianapolis, Indiana

Tape (Cotton)

Industrial Tape Mills Company, Trenton Avenue and Sergeant Street, Philadelphia, Pennsylvania

Thread (Linen, Cotton, Silkateen)

American Thread Company, Holyoke, Massachusetts (cotton)
Edward E. Babb Company, Philadelphia, Pennsylvania (silkateen)
Emile Bernat and Sons Company, Jamaica Plain, Massachusetts (silkateen)
J. L. Hammett Company, Newark, New Jersey (silkateen)
Linen Thread Company, 96 Franklin Street, New York City (linen)
Waldcraft Company, The, Indianapolis, Indiana (silkateen, linen)

Yarns

Art Craft Industries, 66 Church Street, Cambridge, Massachusetts (also art goods)
Cleveden Yarns Company, 117 North Fifth Street, Philadelphia, Pennsylvania
Collins and Aikman, 51st and Columbia Avenue, Philadelphia, Pennsylvania (Worsted yarn for weaving cloth,—85c per pound, 1685 yards to the pound)
Colonial Yarn House, Philadelphia, Pennsylvania
Economy Yarn Company, Box 225 Station F, New York City (Thrums)
Emile Bernat and Sons Company, Jamaica Plain, Massachusetts
H. E. Gunter, 30 East Fourteenth Street, New York City
Hodgson Worsted Mills, Wilmington, Delaware (Fine warp for cloth,—$1.60 per pound, 11,400 yards to the pound)
Horner Brothers Woolen Mills, Eaton Rapid, Michigan
William H. Horstmann Company, Philadelphia, Pennsylvania
January and Wood Company, Marysville, Kentucky (Home Craft Yarn)
Magnus Brush and Craft Materials, Wakefield, Massachusetts ("Dixie Yarn")
M. J. Whittall Associates, Ltd., Worcester, Massachusetts (Thrums)
Peace Dale Yarns, 25 Madison Avenue, New York City
Pepperell Braiding Company, East Pepperell, Massachusetts
Sears-Roebuck Company, Philadelphia, Pennsylvania, (Home-craft Yarn)
S. B. and B. W. Fleisher, Inc., Philadelphia, Pennsylvania
Bernhard Uhlman Co., 107 Grand St., New York City, N. Y.
Waldcraft Company, The, Indianapolis, Indiana

WOODCARVING (See Linoleum Carving)

WOOD INLAY, WOOD PROJECTS, WOODWORKING DESIGNS

Colonial Sales Corporation, 480 Lexington Avenue, New York City
Thurston Supply Company, Anoka, Minnesota

The Kuempel Company, Vocational Supply Building No. 3, Cuttenberg, Iowa
Craftsman Wood Service Company, 7357 Vincennes Avenue, Chicago, Illinois
H. L. Wild, 510 East Eleventh Street, New York City
W. W. Burst, Box 1094, Huntington, West Virginia
Art Inlayers, 2695 Twenty-first Avenue, San Francisco, California
Ornamental Products Shoppe, 1293 East Ninth Street, Cleveland, Ohio

WOODWORKING TOOLS AND MATERIALS

American Handicrafters Corporation, New York City
Athol Machine and Foundry Company, Athol, Massachusetts (vises)
Brodhead-Garrett Company, Cleveland, Ohio
Delta Manufacturing Company, Milwaukee, Wisconsin
Fellowcrafters, 64 Stanhope Street, Boston, Massachusetts
Goodell-Pratt Company, Greenfield, Massachusetts
Henry Disston and Sons, Philadelphia, Pennsylvania
Irwin Auger Bit Company, The, Wilmington, Ohio
Lancaster Iron Works, Inc., Lancaster, Pennsylvania
Lusky, White and Coolidge, 71 West Lake Street, Chicago, Illinois
Miller Falls Company, Miller Falls, Massachusetts
South Bend Lathe Works, South Bend, Indiana
Stanley Rule and Level Company, New Britain, Connecticut
Universal School of Handicrafts, R.K.O. Building, New York City

F. INEXPENSIVE MATERIALS FOR MANUAL ACTIVITIES

Teachers of the mentally retarded have long recognized the educational possibilities of free, inexpensive, and discarded materials for the construction of useful and ofttimes attractive articles for the school, home, and playground. In addition to the manu-mental training involved, this practice develops an appreciation of the inherent but frequently unrecognized possibilities of discarded "odds and ends" and places within the reach of the pupils' materials for leisure time occupations.

The suggestions listed below are indicative of the scope and usefulness of salvaged materials. The list is not complete, but it covers those sources that have come to the attention of the Division of Special Education. The Division will appreciate being informed as to new sources for such materials, in order that the information may be shared with all special teachers.

Materials	*Uses*	*Sources*
1. Bookbinders Linen	Binding booklets, albums; folding checkerboards; writing portfolios; covering memorandum pads, calendar pads, etc.	Local Printing Houses
2. Bricks	Door stops and weights. (Cover bricks with paper and decorate as desired. Mosaic paper decorations, using small pieces of bright colored paper outlined with black, are effective.)	Local

Materials	*Uses*	*Sources*
3. Cones (Pine)	Trees for sand table miniatures. Bodies of birds and animals. Christmas tree decorations.	Local
4. Cork	Coasters, mats, tiles, serving trays, book covers, luncheon mats, checkerboards, waste paper baskets, etc.	Cork and Linoleum Factories. Automobile Supply Houses
5. Cloth a. Bags (1) Burlap	Washed, raveled, and dyed for weaving table scarfs, book bags, rugs, etc. Foundations for hooked rugs.	Local
(2) Sugar and Flour sacks	Crayonexed or stencilled wall hangings, cushions, etc. Aprons, towels, curtains, etc., decorated with stencilled, crayonexed or embroidered design.	Local
b. Dish Cloths (Mesh)	Shopping bags, sweaters, etc. (Decorated with net weaving.)	Local 5 and 10c stores
c. Hosiery (1) Stocking Roundings, Links, or "Looper Clips"	Pot holders, rugs, caps, hand bags, knitting bags, hooked rugs, pillow tops, telephone mats.	Vaughan Knitting Co., Pottstown, Pa. 5 and 10c lb.
	(Roundings are joined with slip knot for carpet weaving)	Colonial Crochet Links, 1940 E. Eighth Street, Charlotte, N. C. 2 types (weaving, crocheting) 1—10 lb. lot 45c 10—25 lb. lot 40c 25 or more lb. lot 35c Dayton Hosiery Mills, Dayton, Tenn. 15c lb. Bloomsburg Hosiery Mills, Bloomsburg, Penna. (White only—5c lb.)
(2) Old Stockings	Stuffed toys, puppets, etc. Cut spirally and used for weaving rugs.	Local
d. Oil Cloth	Animals, dolls purses, book covers, stool covers, doilies, scarfs, cushions, wall pockets, potholders, etc.	Sample books of oil cloth Local

Materials	*Uses*	*Sources*
e. Patches and Remnants (1) Cotton	Appliqued designs, soft toys, bean bags, etc. Patchwork cushions and quilts.	Waldorf Mfg. Co., Syracuse, N. Y., 10c lb. Paris Neckwear Co., Walnutport, Pa., 5-10c lb.
(2) Silk and Velvet	Appliqued designs, soft toys, bean bags, etc. Patchwork cushions and quilts.	Union Specialty Works, Boonville, N. Y.
(3) Wool	Appliqued designs, soft toys, bean bags, etc. Patchwork cushions and quilts.	J. Reiss Co., 19 Mercer Street, New York City. Patches, 5c lb. Cotton remnants, 30c lb. (½ yd.-3yds.) Sample cards from local tailors.
f. Strips (1) Cotton	Rag carpet, hooked rugs, crocheted and braided rugs.	J. Reiss Co., 19, Mercer Street, New York City ½—8 yds. long 10c lb.
(2) Cut and sewed Carpet Rags	Rag carpet, hooked rugs, crocheted and braided rugs.	Local WPA Sewing Projects
(3) Rayon	Woven rugs, bags, and cushion tops; hooked rugs, chair seats, mats; braided mats and doilies; crocheted rugs.	Glenora Mills, Elmira, N. Y., 6c-10c lb. (nice length and quality)
(4) Sateen Strips (selvage stripping)	Rag carpet, hooked rugs, crocheted and braided rugs.	Chatham Blanket Mills, Winston-Salem, N. C. (usually light color) 10c lb.
(5) Silk	Woven rugs, bags, and cushion tops; hooked rugs, chair seats, mats; braided mats and doilies; crocheted rugs.	Walnutport Tie Factory, Walnutport, Penna., (long strips) 20c lb.
(6) Clothing	Cleaned at home or in schools; repaired and remodeled.	Local
(7) Leather Remnants (Grained and Tooling Leather)	Belts, purses, keytainers, wallets, billfolds, scissors cases, comb cases, etc.	Dwinnell Craft Shop, Elm Grove, Wheeling, W. Va. Tooling calf skin $1.10 lb. 3 lb. lots .85 lb. Non-tooling .45 lb. 5 lb. lots .35 lb. Fellowcrafters, 64 Stanhope St., Boston, Mass. Tooling calf $1.00 lb.

Materials	*Uses*	*Sources*
(7) Leather Remnants (Continued)		Tooling and carving cowhide .45 lb. Non-tooling 50—60c lb. American Handicrafts Co., 193 William Street, New York City Leather Scrap No. 1 selection $1.20 lb. Tooling cowhide .60 lb. N. A. Hall, 99 Bedford St., Boston, Mass. Tooling Scrap $1.00 lb. Handicraft Leather & Supply Company, 22 Andrews St., Rochester, N. Y. Non-tooling 15c-$1.00 lb. Tooling calf (choice pieces) $2.00 lb. Tan and Black 50—75c lb. Toebe, Chas., 149 N. 3rd St., Philadelphia, Pa. Tooling Scrap $1.10 lb. 5 lb. $5.00 Non-tooling Scrap .65 lb. Non-tooling Scrap 5 lb. $3.00 Universal School of Handicraft, 1270 Sixth Ave., N. Y. C. RKO Building Tooling Scrap $1.25 lb. Deluxe Scrap .75 lb.
(8) Linoleum	Block prints for greeting cards; tea tiles, flower pot stands, wall plaques, etc.	Local House Furnishing stores Polar Mfg. Co., 401 N. Broad St., Phila., 5c lb.
(9) Paper (a) (I) Boxes	Toy furniture, looms	See "When Mother Lets Us Make Paper Box Furniture" by G. Ellingwood Rich, Moffat Yard and Co., 1917. Local
(II) Round	Looms Foundation for decorative applications; waste paper baskets, string boxes, trinket boxes.	Local dairies and ice-cream dealers. See publications of Dennison Manufacturing Co., Phila.
(b) Corrugated Paper	Playhouse roofs, log cabins, fences, etc.	Local

Materials	*Uses*	*Sources*
(c) Crepe Paper	Novelties; paper flowers; plates, bowls, doilies, place mats, luncheon sets, etc.	See publications of The Dennison Manufacturing Co., Philadelphia, Penna. Local
(d) Envelope Linings	Mosaic designs on bricks, bottles, boxes, and lamp shades.	Local
(e) Cutwork paper doilies	Designs for gourds and papier mache plates, bowls, trays, etc.	Local
(f) Magazine Advertisement (Brightly colored)	Mounted pictures, posters, seatwork envelopes. Correlated seatwork of many types Jig saw puzzles. Indian bead necklaces. Rolled diagonally into pencil size tubes and assembled as flower pot covers. Cut into small pieces and used as mosaic designs on bottles, boxes, waste paper baskets, etc.	Local
(g) Newspapers	Aprons; papier mache bowls, plates, trays, fruits, vegetables, etc. False faces and puppets; tufted rugs for picnics, kindergarten and primary rooms.	Local
(h) Paper window shades	Primary reading charts	5 and 10c stores Local
(i) Seed catalogs	Correlated seatwork	Local
(j) Table backs	Backs for bookbinding; looms, checkerboards (pocket size) etc.	Local
(k) Wall paper sample books	Cover paper for booklets, writing portfolios, waste paper and sewing baskets, utility boxes, etc. Doll house wall paper.	Local
(l) Wrapping paper	Decorated for booklet cover paper, seatwork envelopes. Primary Reading Charts. Book jackets, aprons, etc.	Local

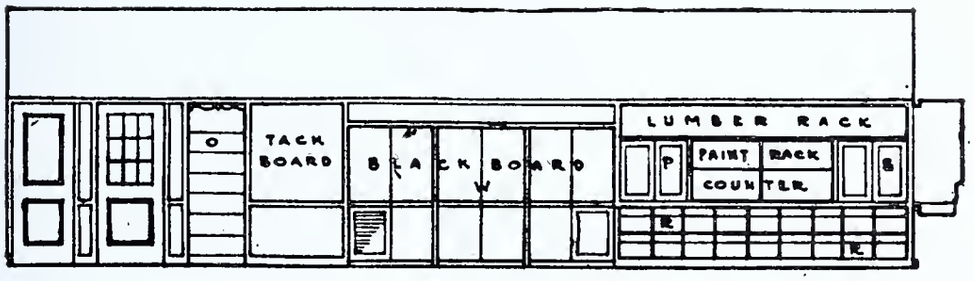
Materials	*Uses*	*Sources*
(10) Rubber		
(a) Inner Tubes	Toys, mats for flowerpots, mats for sink and drain board. (Use pinking iron for pinking the edges)	C. S. Osborne Co., Box 183, Newark, N. J. (pinking irons) Local
(b) Old Hot Water Bottles	Toys and novelties	Local
(c) Sponges	Toys and novelties	Sponge Rubber Products Co., Derby, Conn.
(11) Sponges	Miniature trees, animals, etc., for sand table models	Local
(12) Stamps	Post office project correlated seatwork. Stamp albums.	Local
(13) Tin		
(a) Cans	Candlesticks, sconces, ash trays, lanterns, weather vanes, bird houses, flower bowls and baskets, fruit dishes, hanging baskets, cookie cutters, sandwich cutters, camp equipment, etc.	See "55 New Tin Can Projects," Lukowitz, Bruce Publishing Co., Milwaukee, Wisconsin "Making Tin Can Toys," Thatcher, J. P. Lippincott Co., Phila. Local
(b) Scrap	Door stops, letter holders, book ends, etc.	Local
(14) Wood		
(a) Broom handles	Wheels for toys, hobby horse sticks, etc.	Local
(b) Chalk boxes	Bead looms, doll house furniture, etc.	School Local
(c) Cheese boxes (rectangular	Ivy trellis window boxes, mail boxes, trinket boxes, wagons, trucks, etc., doll house furniture	
(d) Cigar boxes (good quality)	Utility or trinket boxes decorated with carved or inlaid designs; bead looms, doll house furniture, garden sticks, letter openers, paper knives, etc.	Local
(e) Clothes pins (combined with tin cans)	Window boxes, flower pots, wall baskets, table center pieces.	See publications of Dennison Manufacturing Co., Phila., Penna. Local

Materials	*Uses*	*Sources*
(f) Meat skewers	Pointed and used as tools for clay, link weaving, rake knitting, etc. (Many uses in connection with sand table models.)	
(g) Sawdust	Toy stuffing, imitation grass (dyed green)	
(h) Scrap lumber		Local Lumber Mills
(i) Spools	Wheels, spool knitters, toys, tops, puppets, (cut in half and used as legs for linoleum mats)	
(j) Store boxes and crates	Recitation chairs, library corner tables, carved wall plaques, carved sides of magazine racks, fireside baskets, bins for pupils' unfinished handwork. Miniature houses, grocery stores, book cases and shelves, files for records and patterns, bird houses, toys, and many other uses	
(15) Yarns (a) Chenille	Rugs	Kutztown Textile Co., Kutztown, Penna. Millends 5c lb.—10 lb. lots. Todd Carpet Mills, Carlisle, Penna. Skeins, 45c-55c lb.
(b) Filler	Rugs	Tinkler and Co., 527 A St., Phila., Penna. "Cape Cod Variegated Filler Yarns" in pound tubes (9 selections) .35 lb.
(c) Knitting Yarn (the kind used in knitting woven suits and dresses)	Table scarfs, purses, pillow tops, knitting bags, etc.	Clifton Heights Yarn Co., Clifton Heights, Penna. $.50 lb.
(d) Thrums	Hook rugs; kindergarten balls and toys; crocheted and woven table runners, shopping and knitting bags. New weaving	M. J. Whittal Associates, Ltd., Worcester, Mass. "Wool Thrums"

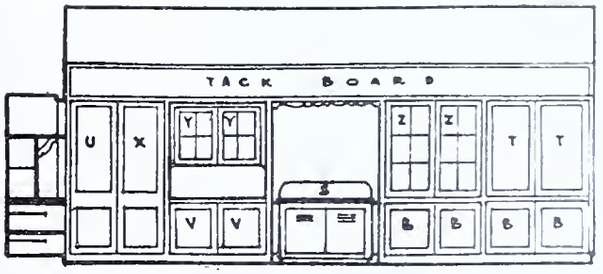
Materials	*Uses*	*Sources*
(e) Wool	Many uses	Strawbridge and Clothier, Philadelphia, Penna. "Mill Ends"—10c a ball on special days. Economy Yarn Co., South Lancaster, Mass., Bright Colors, 25c lb.

The reader is referred to:

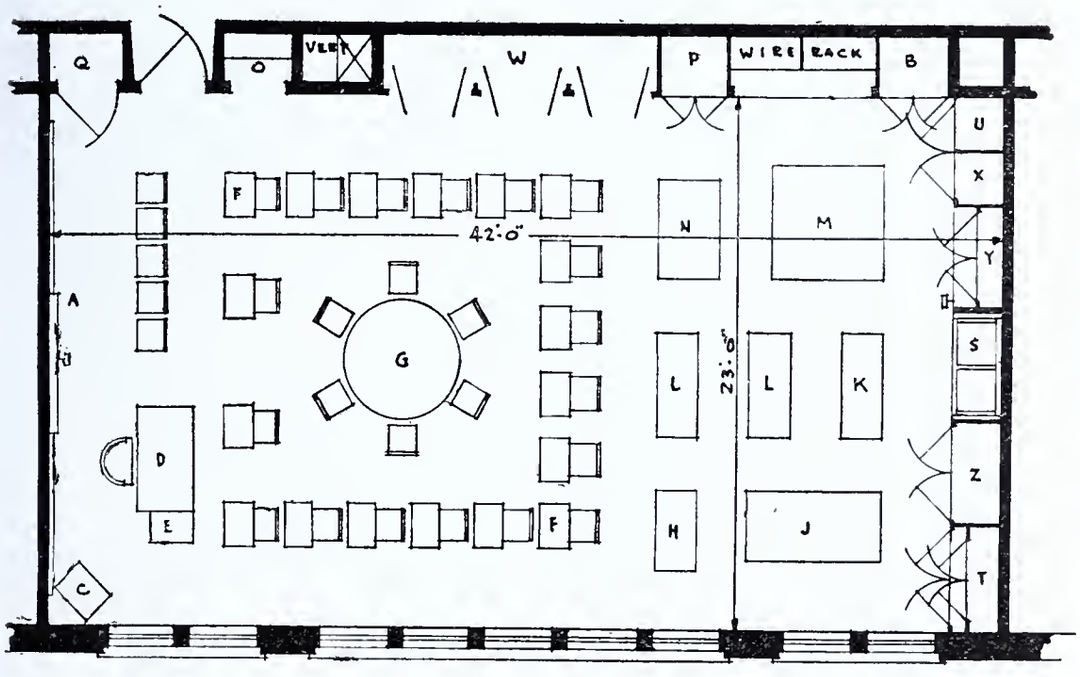
"Art adventures with discarded materials" by E. K. Perry, The Circle Book Co., 33rd and Arch Sts., Phila., 1933. $2.50. Contains a wealth of suggestions.



SIDE ELEVATION

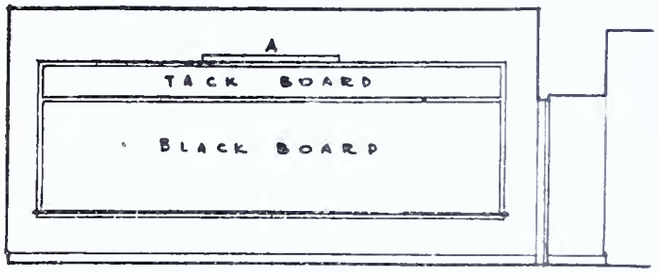


REAR ELEVATION



PLAN

SCALE 0 5 10



FRONT ELEVATION

KEY

A PROJECTION SCREEN
B CRAFTS SUPPLIES
C PHONOGRAPH
D TEACHER'S DESK
E FILING CASE
F INDIVIDUAL CHAIRS & TABLES, VARIED HEIGHTS
G LIBRARY TABLE, ROUND OR SQUARE
H SEWING MACHINE
J SAND TABLE, REMOVABLE TOP.
K PAINT TABLE, ZINC TOP
L WORK BENCH
M LOOM
N WORK TABLE
O BOOKCASE FOR SEAT WORK, ED'L. TOYS, ETC.
P POSTER SUPPLIES.
Q TEACHER'S CLOSET
R STORAGE BINS WITH INTERMEDIATE SHELVES
S COMB. SINK & LAUNDRY TRAY. STEEL CAB. FOR PAINT
T TOOL CABINET
U UTILITY CLOSET WITH BUILT-IN IRONING B'D.
V. KITCHEN UTENSIL CAB. WITH ZINC COUNTER
W WARDROBE
X HOMEMAKING EQUIP. CAB.
Y DISH CUPBOARD
Z DISPLAY CABINET.

NOTES:-
ALL CABINETS ETC. SHALL BE EQUIPPED WITH ADJUSTABLE SHELVING AS REQUIRED.

SUGGESTED LAYOUT FOR A SINGLE UNIT CLASS FOR THE MENTALLY RETARDED

DEVELOPED IN COLLABORATION WITH THE DIVISION OF SPECIAL EDUCATION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF PUBLIC INSTRUCTION

DIVISION OF SCHOOL PLANT
HUBERT C EICHER CHIEF

L-A-CH

SCALE 1/8" = 1'-0" DRAWN BY JGT

DWG. NO. SE-1

G. Suggested Layout for a Single Unit Class for the Mentally Retarded

MATERIAL LIST
Table With Shelf

Item	Use	No.	Size	Material
1	Top	1	4″x1″x14′-0″	Oak
2	Legs	1	2″x2″x12′-0″	"
3	Shelf Edge	1	4″x1″x 3′-0″	"
4	Shelf and Back	1	4″x1″x12′-0″	Poplar
5	Aprons	1	4″x1″x 8′-0″	Oak
6	Corner-Angles	14	1″x1″x½″x.072″	Wrought Steel

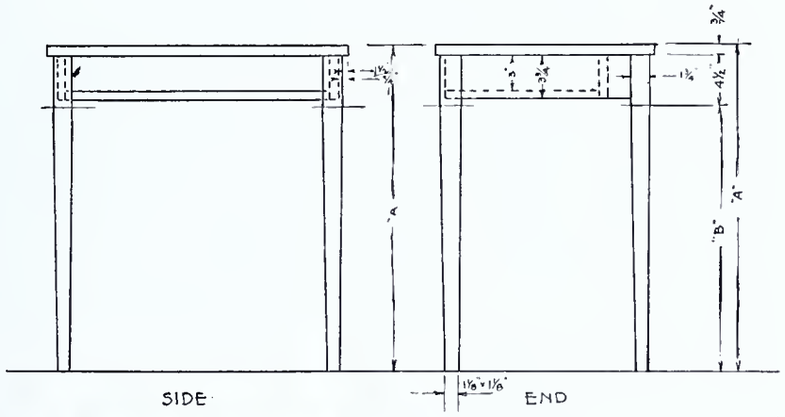
TABLE OF DIMENSIONS
For Various Size Tables

Size	"A"	"B"	"C"	"D"
18″x24″	2′-0″	1′- 6¾″	2′-0″	1′-6″
18″x24″	2′-2″	1′- 8¾″	2′-0″	1′-6″
20″x28″	2′-4″	1′-10¾″	2′-4″	1′-8″
20″x28″	2′-6″	2′- 0¾″	2′-4″	1′-8″

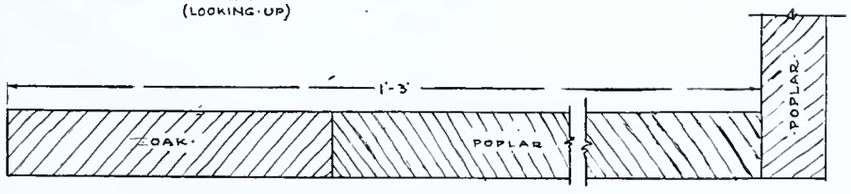
MATERIAL LIST
Standard Table

Item	Use	No.	Size	Material
1	Top	1	4″x1″x14′-0″	Oak
2	Legs	1	2″x2″x12′-0″	"
3	Aprons	1	4″x1″x 8′-0″	"
4	Corner Angles	14	1″x1″x½″x.072″	Wrought Steel

·STANDARD · TABLE·
·WITH·OPEN·SHELF·

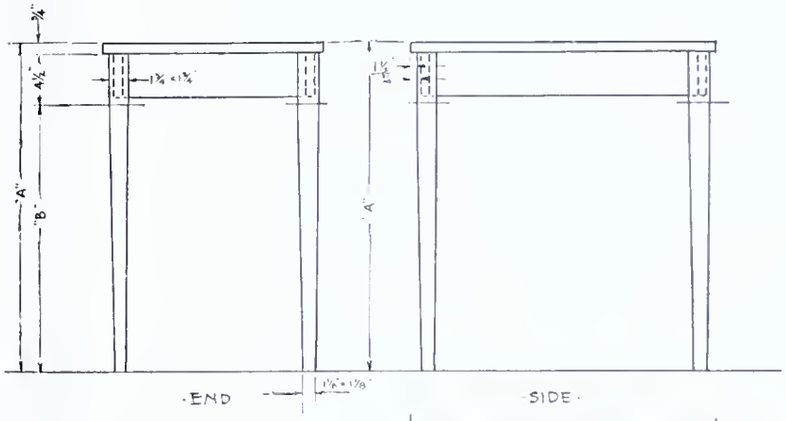


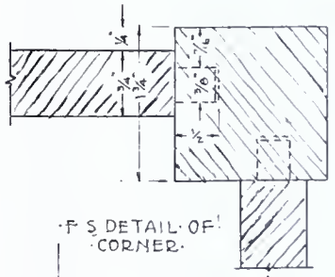
·PLAN
(LOOKING·UP)



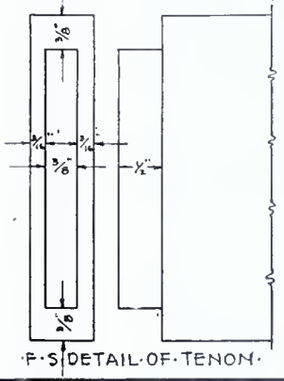
·F S·DETAIL·OF SHELF·

·STANDARD· TABLE·
·WITH·APRON·





PLAN·
(LOOKING UP)



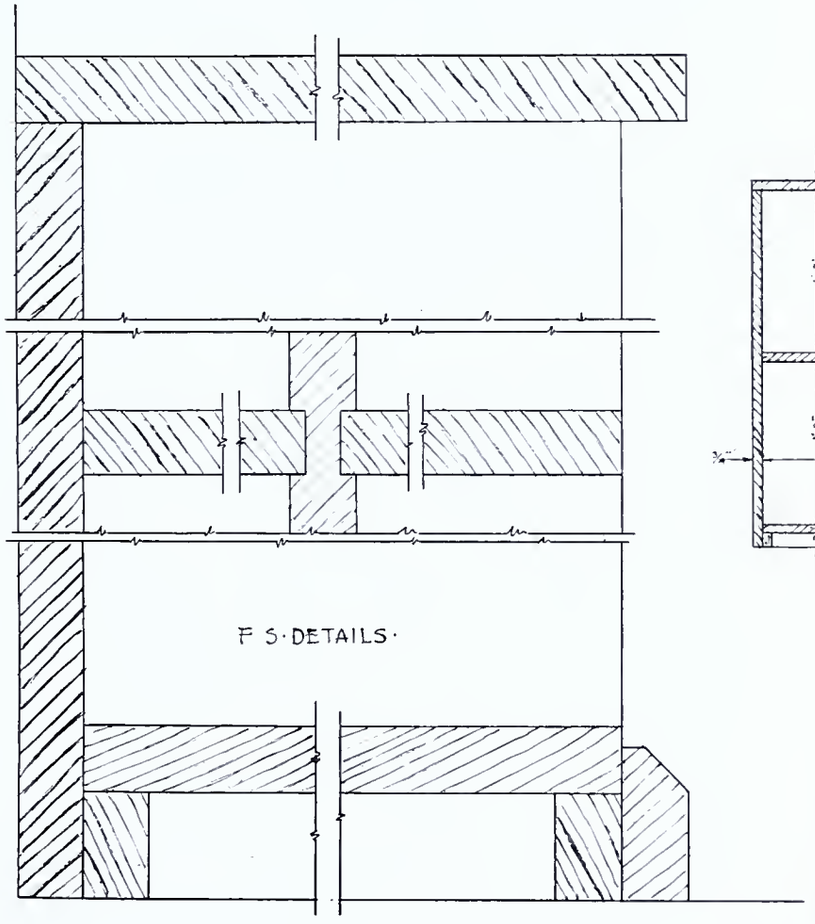
·SPECIAL SCHOOL FURNITURE
·TABLES·

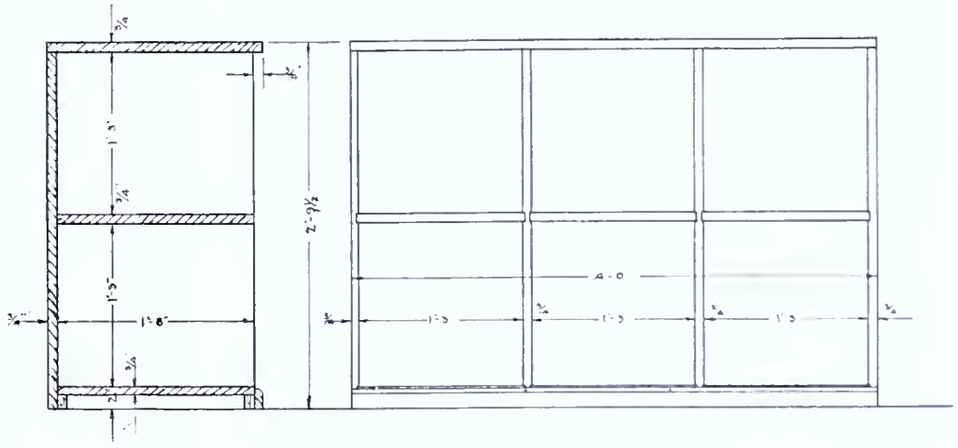
DIVISION·OF SPECIAL EDUCATION
BUREAU OF INSTRUCTION
DEPARTMENT OF
PUBLIC INSTRUCTION
COMMONWEALTH OF PENNSYLVANIA

DATE·3-29-38 | DRAWN F.6-7 | DRAWING NO. F.6-1·
SCALE·1½"=1'-0" | CHECKED· | APPROVED

H.-2—Plans of Tables

NOTE: Some teachers prefer having a shelf—six inches from the top of each bin—for the pupils' books and pencils.





DETAILS·OF BIN CABINET

MATERIAL LIST

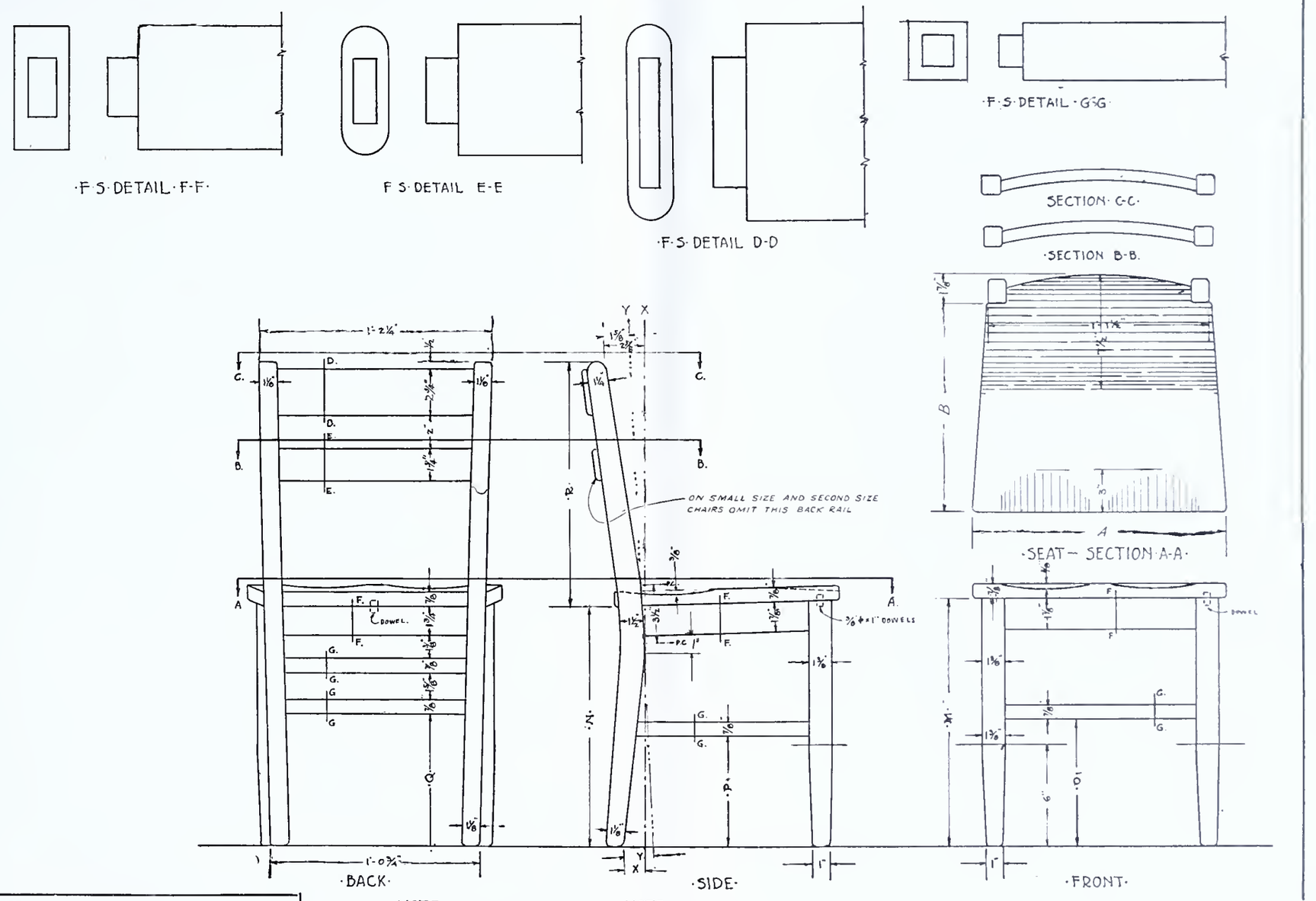
Item	Use	Number	Size	Material
1	Top	2 Pcs.	1"x4"x12'-0"	Oak
2	Back	4 Pcs.	1"x4"x1[illegible]'-0"	Poplar
3	Shelves	2 Pcs.	1"x4"x12'-0"	Oak
4	Uprights	6 Pcs.	1"x4"x12'-0"	"
5	Base	1 Pc.	1"x2"x4-0'	"

SPECIAL·SCHOOL·FURNITURE
·BIN·CABINET·

DIVISION OF SPECIAL EDUCATION
BUREAU OF INSTRUCTION
DEPARTMENT OF
·PUBLIC INSTRUCTION
COMMONWEALTH OF PENNSYLVANIA

DATE 3·24·38. DRAWN [illegible]
SCALE 1½"=1'-0 ·CHECKED· ·APPROVED
DRAWING NO 6-2.

H.-3—Plans of Bin Cabinet



MATERIAL LIST

Item	Use	No.	Size	Material
1	Seat	1	1″x6″x4′-0″	Oak
2	Front Legs	1	1½″x1½″x3′-0″	"
3	Rear Legs	1	1¼″x4″x5′-6″	"
4	Rungs	1	1″x1″x5′-0″	"
5	Aprons	1	1″x2″x4′-0″	"
6	Back Slat	1	2″x2″x1′-3″	"
7	Back Slat	1	2″x3″x1′-3″	"

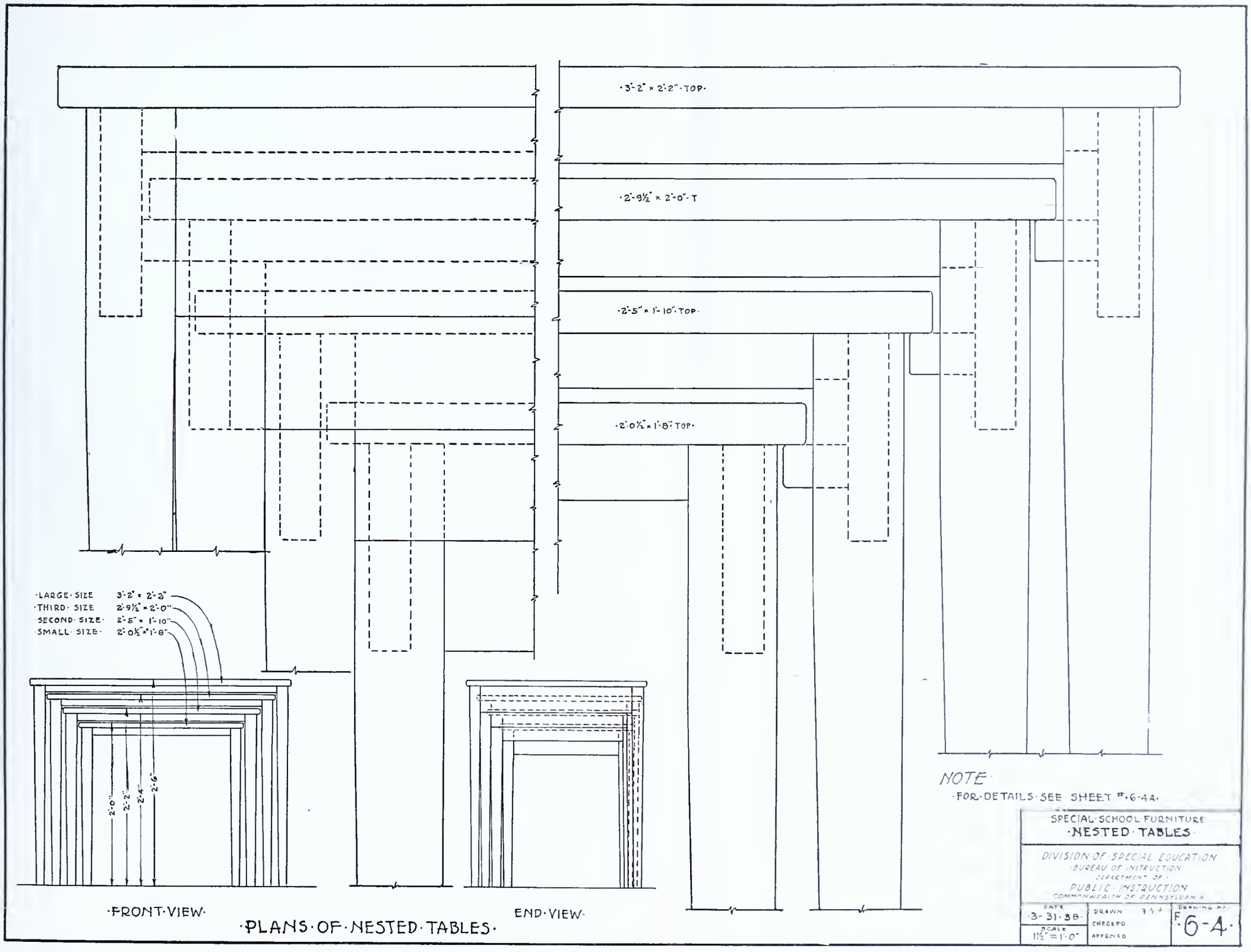
TABLE OF DIMENSIONS

A	B	R	Size	M	N	O	P	Q	X	Y
1′-1½″	11½″	11¾″	Small Size	1′-0⅝″	1′-0⅛″	4¼″	23¾″	5⅝″	⅞″	1⅛″
1′-2″	1′-0″	1′-1″	Second Size	1′-2⅛″	1′-5⅜″	5¾″	4¼″	7⅛″	1⅛″	1½″
1′-3½″	1′-1″	1′-2¼″	Third Size	1′-3⅝″	1′-3⅛″	7¼″	33¾″	8⅝″	1⅜″	1⅜″
1′-4½″	1′-3½″	1′-3½″	Large Size	1′-5⅛″	1′-4⅝″	8¾″	7¼″	10⅛″	1⅝″	2¼″

SPECIAL SCHOOL FURNITURE·
·POSTURE-CHAIR·
·DIVISION·OF·SPECIAL·EDUCATION·
BUREAU OF INSTRUCTION
DEPARTMENT OF
PUBLIC INSTRUCTION
COMMONWEALTH OF PENNSYLVANIA

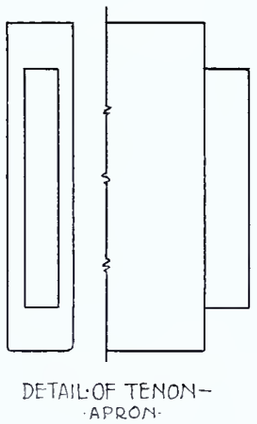
DATE	DRAWN	DRAWING NO
8-25-38	7-4-7.	F·6-3.
SCALE 3″ = 1′-0″	CHECKED J.F.A.	
	APPROVED	

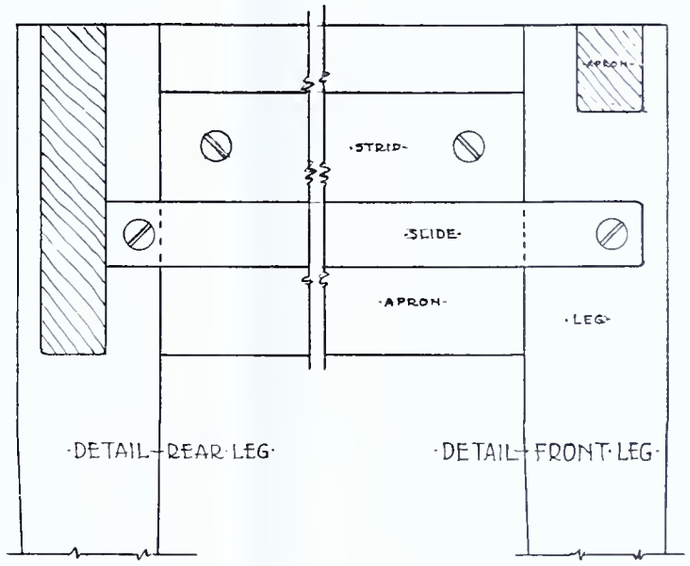
H.-4—Plans of Posture Chair

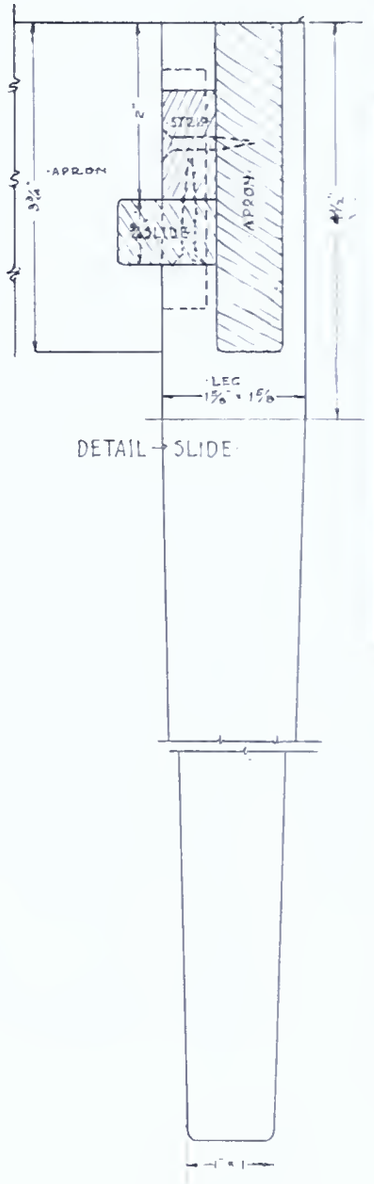


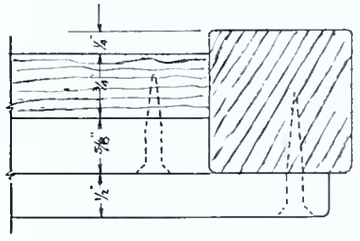
·PLANS·OF·NESTED·TABLES·

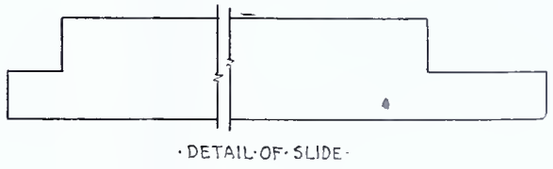
H.-5—Plans of Nested Tables









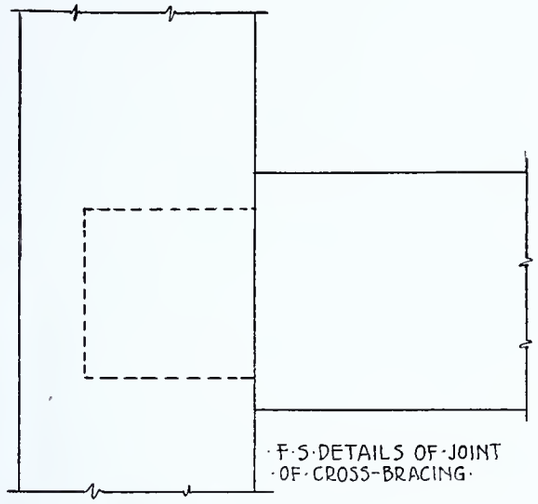


MATERIAL LIST

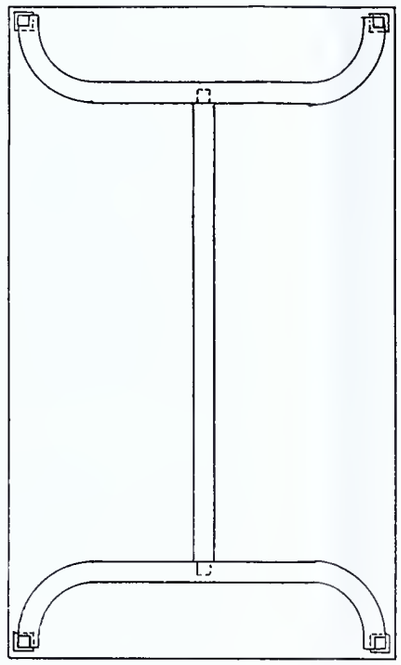
Item	Use	Amount	Size	Material
1	Tops	12 Pcs.	¾"x3¾"x10'-0"	Oak
2	Aprons	2 Pcs.	¾"x3¾"x10'-0"	"
3	Front Aprons	1 Pc.	¾"x1"x10'-0"	"
4	Slides	1 Pc.	¾"x1¼"x14'-0"	"
5	Strips	1 Pc.	¾"x1¼"x14'-0"	"

SPECIAL SCHOOL FURNITURE
DETAILS OF NESTED TABLES
BUREAU OF INSTRUCTION
DEPARTMENT OF PUBLIC INSTRUCTION
COMMONWEALTH OF PENNSYLVANIA
DATE 4-11-38
SCALE F-5
DRAWN
CHECKED
APPROVED
DRAWING NO. F-6-4A

H.-6—Plans of Nested Tables (in detail)

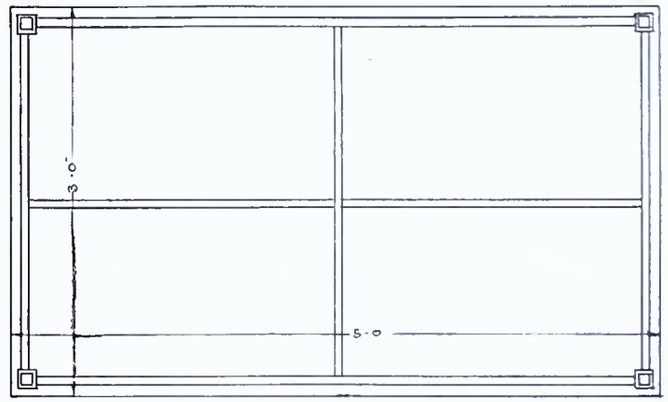


SECTION

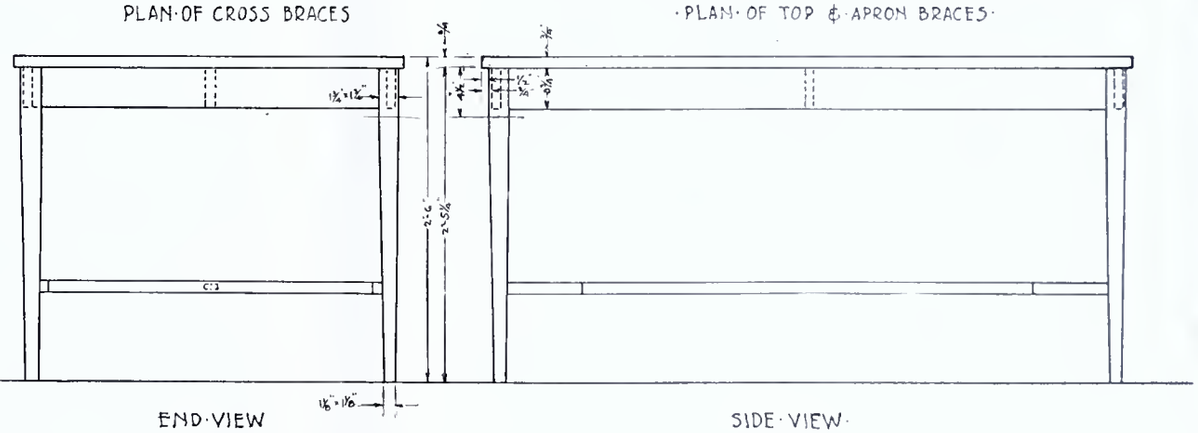


PLAN OF CROSS BRACES

F S SECTION THROUGH EDGE
OF TABLE

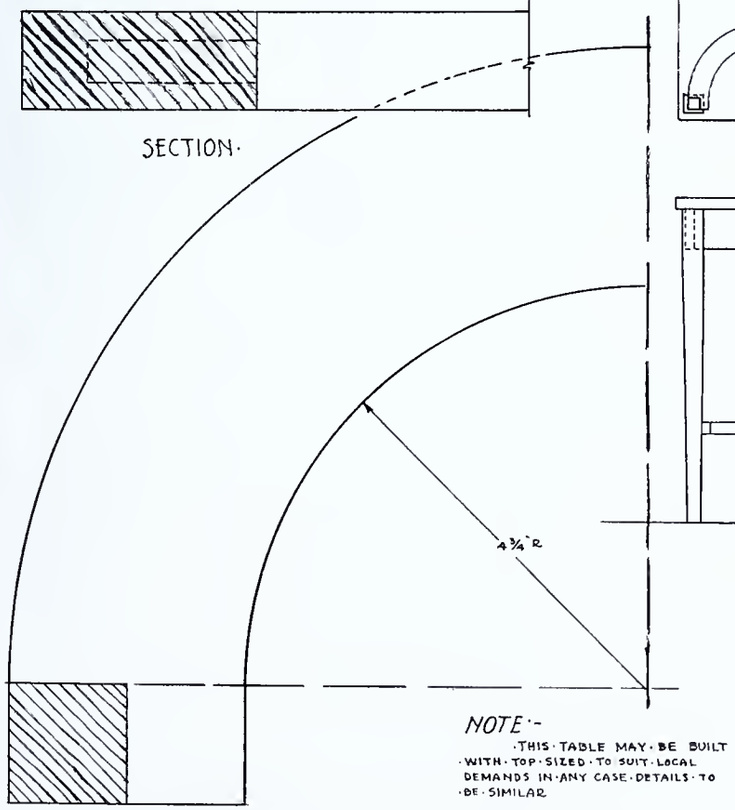


PLAN OF TOP & APRON BRACES



END VIEW

SIDE VIEW



F·S·DETAIL OF CROSS BRACE AT LEG

MATERIAL LIST

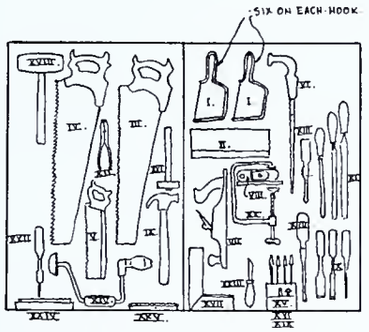
No.	Item	Amount	Size	Material
1	Top	6 Pcs.	¾"x3¾"x10'-0"	Oak
2	Apron	2 Pcs.	¾"x3¾"x10'-0"	"
3	Cross Aprons	1 Pc.	¾"x3¾"x10'-0"	Poplar
4	Cross Brace	1 Pc.	1⅛"x3¼"x4'-0"	Oak
5	Long Brace	1 Pc.	1⅛"x2¾"x4'-0"	"
6	Legs	1 Pc.	1¾"x1¾"x10'-0"	"
7	Cover	1 Pc.	3'-2"x5'-2"x16" Gauge	Zinc or Other Metal
8	Screws	6 Doz.	¾"x#10	N. P.-R. H. Wood Screws

SPECIAL SCHOOL FURNITURE
PAINT TABLE

DIVISION OF SPECIAL EDUCATION
BUREAU OF INSTRUCTION
DEPARTMENT OF
PUBLIC INSTRUCTION
COMMONWEALTH OF PENNSYLVANIA

DATE: 4-11-38 | DRAWN: F.G.J. | CHECKED: | APPROVED: | SCALE: 1½"=1'-0" | DRAWING NO. F 6-5

H.-7—Plans of Paint Table



SKETCH SHOWING SUGGESTED ARRANGEMENT OF TOOLS
NOT TO SCALE

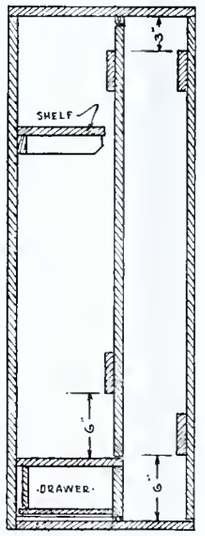
THIS SKETCH IS TO BE USED AS A GUIDE ONLY
LAYOUT SHOULD BE MADE IN EACH CASE USING TOOLS AS
ACTUALLY PURCHASED

LIST OF TOOLS SHOWN ABOVE

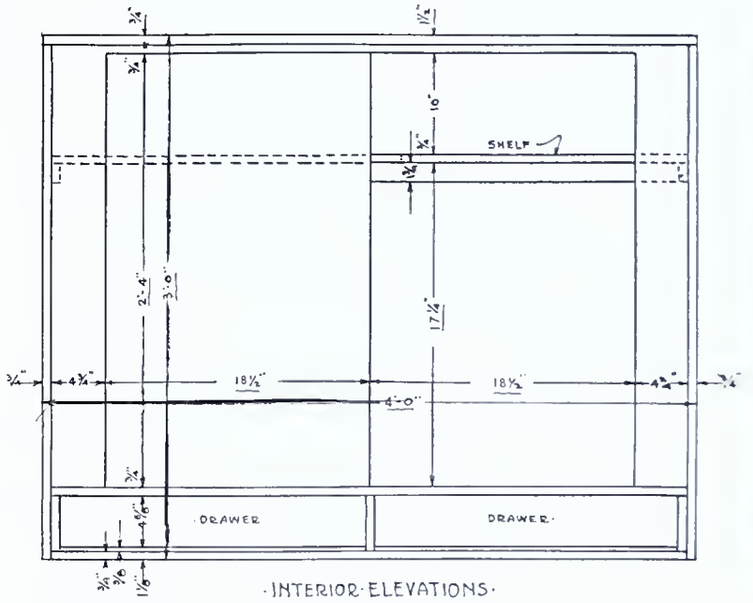
I	COPING SAWS	XIII	SCREW-DRIVERS
II	SAW BLADES	XIV	BRACE
III	CROSS-CUT SAW	XV	BITS
IV	RIP SAW	XVI	COUNTER SINK
V	BACK SAW	XVII	TRY SQUARE
VI	COMPASS SAW	XVIII	MALLET
VII	JACK PLANE	XIX	NAIL SET
VIII	BLOCK PLANE	XX	IRON CLAMP
IX	HAMMERS	XXI	MARKING GAUGE
X	CHISELS	XXII	PUSH DRILL
XI	FILES	XXIII	SLOYD KNIFE
XII	CUTTING PLIERS	XXIV	OIL STONE
XXV	FOLDING RULE		

Note: Inside compartment is for the teacher. Some prefer three shelves there. The drawer should be lined with metal. Some have successfully used lighter weight materials.

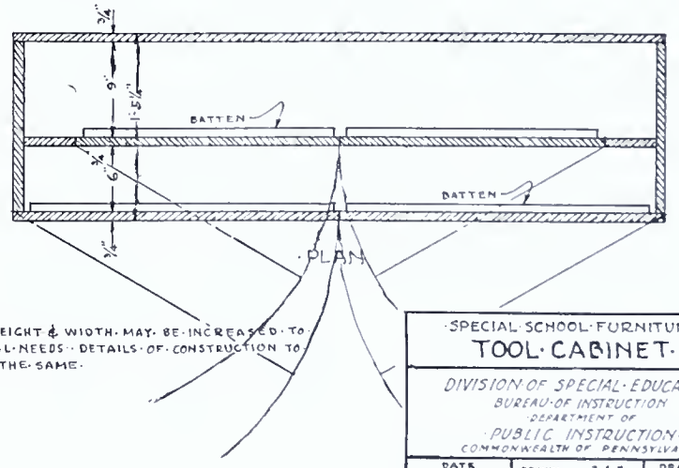
MATERIAL LIST				
Item	Use	Number	Size	Material
1	Top, Sides, Bottom	9 Pcs.	¾″x3¾x12′-0″	Oak
2	Door	10 Pcs.	¾″x3¾x12′-0″	"
3	Drawer Fronts	1 Pc.	¾″x4¾″x5′-0″	"
4	Shelf	2 Pcs.	¾″x3¾″x12′-0″	"
5	Strips	1 Pc.	¾″x1¾″x10′-0″	"
6	Back	6 Pcs.	¾″x3¾″x12′-0″	"
7	Drawer Sides, Etc.	2 Pcs.	½″x8″x12′-0″	Fir
8	Battens	2 Pcs.	¾″x3¾″x10′-0″	Oak



SECTION



INTERIOR ELEVATIONS



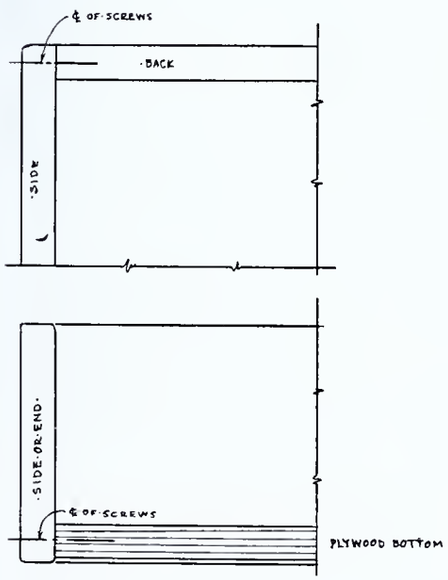
PLAN

NOTE:
HEIGHT & WIDTH MAY BE INCREASED TO SUIT LOCAL NEEDS DETAILS OF CONSTRUCTION TO REMAIN THE SAME

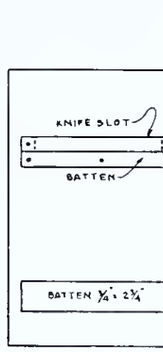
SPECIAL SCHOOL FURNITURE
TOOL CABINET
DIVISION OF SPECIAL EDUCATION
BUREAU OF INSTRUCTION
DEPARTMENT OF
PUBLIC INSTRUCTION
COMMONWEALTH OF PENNSYLVANIA

DATE
DRAWN 7.9.7
CHECKED
APPROVED
SCALE 1½″=1·0″
DRAWING NO F·6-6·

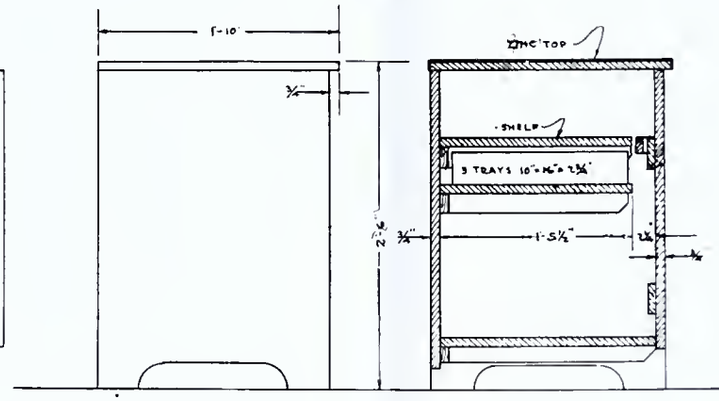
H.-8—Plans of Tool Cabinet



F·S·DETAILS·OF·TRAYS·

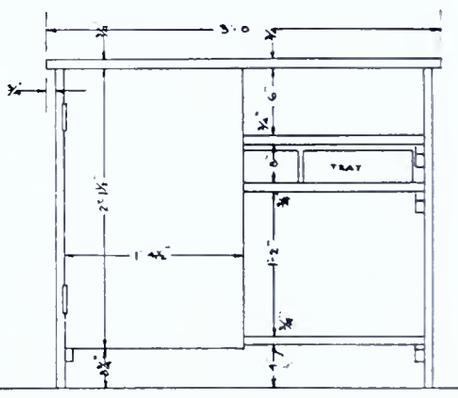


INSIDE OF DOOR

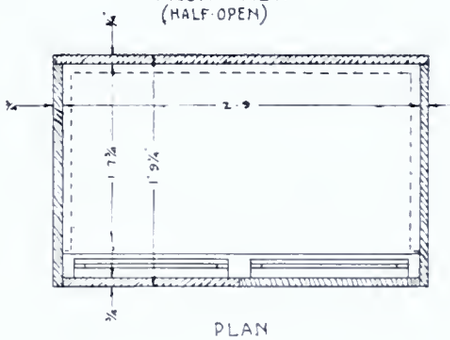


END VIEW

SECTION



FRONT VIEW
(HALF OPEN)



PLAN

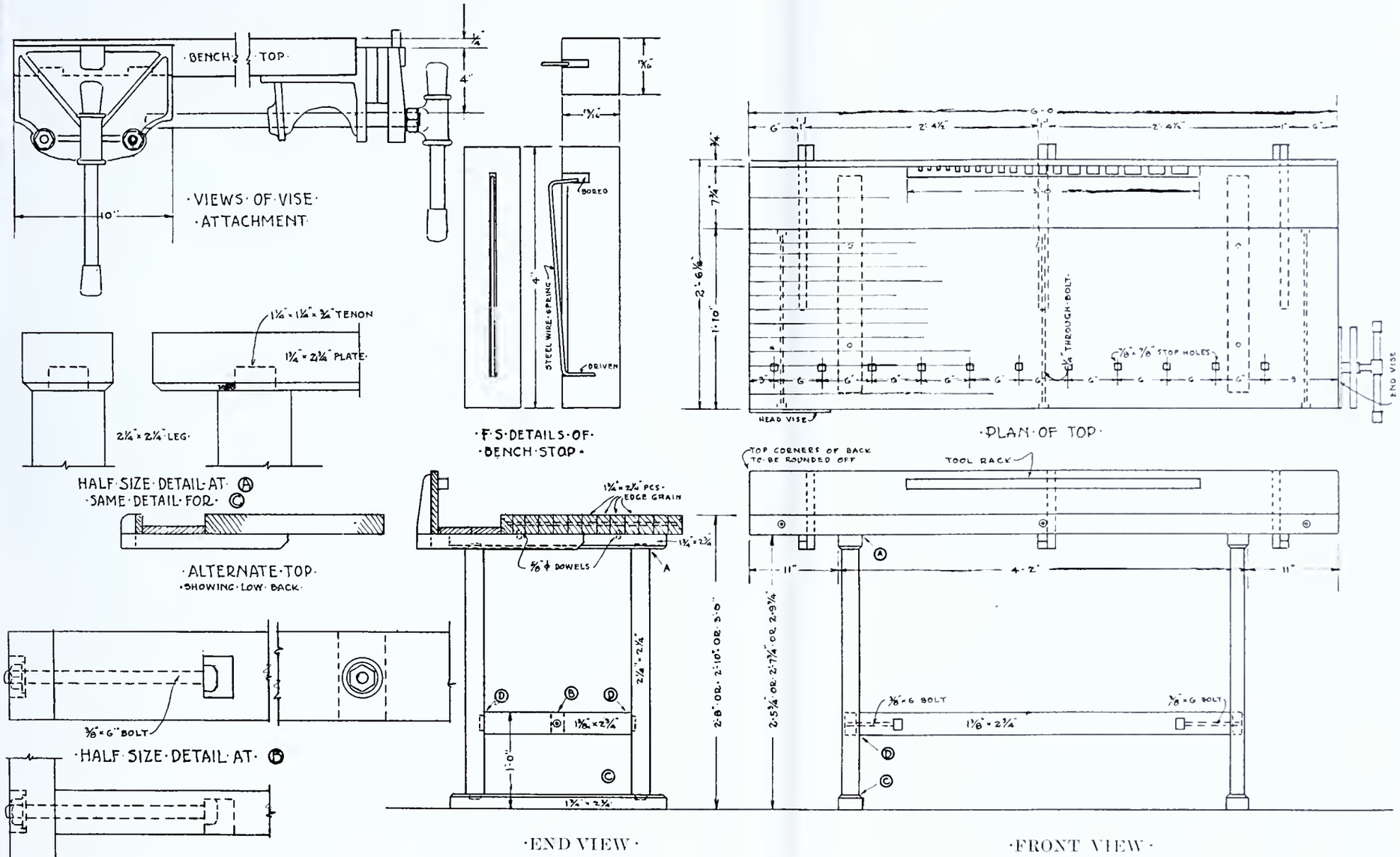
MATERIAL LIST				
No.	Item	Amount	Size	Material
1	Top	2 Pcs.	¾"x3¾"x10'-0"	Oak
2	Ends	3 Pcs.	¾"x3¾"x10'-0"	"
3	Back	1 Pc.	¾"x3¾"x10'-0"	"
4	Doors	1 Pc.	¼"x3¾"x10'-0"	"
5	Shelves	4 Pcs.	¼"x3¾"x12'-0"	"
6	Tray (Sides)	2 Pcs.	⅜"x2¾"x8'-0"	"
7	Tray (Bottom)	3 Pcs.	⅜"x10"x16"	Oak Plywood
8	Battens	1 Pc.	¾"x2¾"x6'-0"	Oak
9	Knife Slots	1 Pc.	½"x1⅜"3'-0"	"
10	Strips	2 Pcs.	¾"x1¾"x12'-0"	"

SPECIAL SCHOOL FURNITURE
KITCHEN UTENSIL CABINET

DIVISION OF SPECIAL EDUCATION
BUREAU OF INSTRUCTION
DEPARTMENT OF
PUBLIC INSTRUCTION
COMMONWEALTH OF PENNSYLVANIA

DATE	DRAWN	DRAWING NO.
4-11-38	CHECKED	F-6-7
SCALE 1½"=1'-0"	APPROVED	

H.-9—Plans of Kitchen Utensil Cabinet



MATERIAL LIST				
Item	Use	Number	Size	Material
1	Top	3	2"x8"x12'-0"	Maple or Pine
2	Trough	1	1"x4"x12'-0"	" " "
3	Back	1	1"x4"x12'-0"	" " "
4	Brackets	1	1"x 2"x8'-0"	" " Fir
5	Legs	1	2½"x2½"x12'-0"	" " "
6	Braces	1	1½"x3"x10'-0"	" " "
7	Plates	1	2"x3"x10'-0"	" " "
8	Tool Rack	1	1"x2"x3'-0"	" " "
9	Dowels	1	⅝"x6"	" " "
10	Bolts	3	¼"x33"	Wrought Iron
11	Bolts	2	⅜"x6"	" "

NOTE
SIZE OF TOP MAY BE VARIED TO SUIT INDIVIDUAL REQUIREMENTS
DETAILS TO REMAIN AS SHOWN

Shelf and solid top are optional

SPECIAL SCHOOL FURNITURE FOR PENNSYLVANIA SCHOOL DISTRICTS

DIVISION OF SPECIAL EDUCATION
BUREAU OF INSTRUCTION
DEPARTMENT OF PUBLIC INSTRUCTION
COMMONWEALTH OF PENNSYLVANIA

DATE	DRAWN	DRAWING NO
4-14-38	CHECKED	F-6-8
SCALE 1½" = 1'-0"	REVISED	
	APPROVED	

H.-10—Plans of Special School Furniture

I A SUGGESTED DAILY PROGRAM FOR A SINGLE UNIT MENTALLY RETARDED CLASS

Prepared for use in connection with the development of Projects in Integrated Units of Study and Suggesting a program of Socializing Activities related directly to the daily Social Experiences of the Pupils

(See the comment introducing the daily lesson outline, in the Appendix, page —)

MORNING SESSION

· 45 **Personal Hygiene and Classroom Duties**

Removal of outdoor wraps, rubbers, and other clothing, if needed (act as ...)
Attention to any necessary personal hygiene, face, hair, hands, nose, teeth, etc.
Weather, classroom duties, ventilation, temperature, light, care of materials and supplies, care of plants, etc

8:00 **Health Survey and Informal Period**

Informal health survey: general appearance, slight indispositions, and indications of communicable diseases
Relevant discussions and attention to any additional preparation for the day

Class participating as a unit

Greeting — Patriotic Song — Discussion
Song — Individual Talent — News Items
Recitations — Stories — Date ( ) Written on blackboard
Salute to Flag

8:15 **Health Instruction**[4] Health related to the current project or unit of study. Group participating as a unit

	GROUP I (Lowest)	GROUP II (Low)	GROUP III (Intermediate)	GROUP IV (High)
	Teaching Period (Reading)	**Correlated Seatwork**	**Correlated Seatwork**	**Correlated Seatwork**
	Review words learned to date	Match words with pictures as review work	Read silently preceding lesson, or Write preceding lesson from corrected copy into booklets	Silent reading from "Our Own Readers" and supplementary material.
	Teach one new word through direct association with object, picture or action	Build phrases, short lessons with dissected word and phrases on strips of oak tag	Answer comprehension questions on preceding lesson	Comprehension questions on previous lessons. (Answers to be written).
BLOCK I	**Correlated Seatwork**	**Teaching Period** (Reading)	(Answers to be written in full if pupils are capable of doing so)	While last reading lesson into "Our Own Readers" after it has been checked by teacher
	Color pictures	Review short lessons previously learned in booklets		
	Read and Do: [illegible] and other similar fine motor exercises	Choral reading using story of previous day		
	Match words with pictures to review work. Include new words	Teach into new words through direct association with objects or pictures		
Oral Expression[3]	Cut and paste pictures in dictionary booklets	Use words in short sentences composed by pupils and read from blackboard		
	Quiet Play			
	Blocks, preferably picture puzzles, and other sense training activities	**Correlated Seatwork**	**Teaching Period** (Reading)	
	Check seatwork I	Color, check, cut, paste pictures in "Our Own Readers" booklets	Oral reading from "Our Own Readers."	
		During this course supplementing instruction	New lesson—developed orally sentence by sentence with pupils and based on their experiences or knowledge, written sentence by sentence on blackboard and read orally by pupils	
Oral Reading		**Quiet Play**		
		Picture cards and other suitable material		
		Check seatwork I		
Silent Reading			**Correlated Seatwork**	**Teaching Period** (Reading)
			Write new story on tablet paper from blackboard model	Oral reading from "Our Own Readers" or supplementary tests.
				New lesson—developed orally sentence by sentence with pupils and based on their experiences or knowledge, written sentence by sentence on blackboard and read orally by pupils

· 45 **Written Expression** Refreshment period. Attention to ventilation, directed outdoor play activities, or supervised games, correlated with unit of study if possible.

	Teaching Period (Spelling)	**Correlated Seatwork**	**Correlated Seatwork**	**Correlated Seatwork**
	Review alphabet to date	Study any misspelled words in preceding dictation	Study any misspelled words in preceding dictation.	Write new reading lesson on tablet paper from blackboard model.
	Teach one new letter, using sandpaper or large wooden letters	Review words in spelling booklets	Write into spelling booklets words and sentences developed in preceding lesson, after being checked by teacher.	Study any misspelled words in preceding dictation.
Spelling	Teach in or three letter words, using sandpaper or large wooden letters if pupils are capable of spelling			Write into spelling booklets, sentences developed in preceding lesson, after being checked by teacher.
	Correlated Seatwork	**Teaching Period** (Spelling)		
	Sort known letters of alphabet (manipulative)	Teach spelling of one new word		
	Trace around and fill block letters and color them	See method suggested in explanatory notes		
Social Studies	Write letters of alphabet			
	Build spelling words (using anagrams)	**Correlated Seatwork**	**Teaching Period** (Spelling)	
	Other similar exercises	Write word from blackboard model	Teach spelling of two new words	
	Check seatwork	Write sentence with new word from blackboard model, if capable of doing so	See method suggested in explanatory notes.	
Penmanship[4]			Write new words from blackboard models.	**Teaching Period** (Spelling)
			Write words in original sentences if possible, if not, have pupils copy sentences from blackboard models.	Teach spelling of two new words.
				See method suggested in explanatory notes

Spelling duration to Groups II, III, IV, one word at a time to each group in succession until each list of new and review words for week is finished.
Social Studies. Local and other significant facts of geography, history, and civics, as related to project or unit of study. Such facts are often used as reading content
Penmanship exercises and materials adapted to individual differences

Recreational Activities — Physical Education — Class participating as a unit.
Supervised and free play adapted to group differences. Out-of-doors whenever possible.

BLOCK II
Manual Activities
1. Socializing activities through group participation in constructing miniature or model of project.
2. Arts and crafts. Woodwork weaving, paper construction, clay modeling, metalcraft, leathercraft, household arts, or other crafts with attention to science and art appreciation. (Utilization in color and related to units of study)
3. School journeys and nature study trips
4. Proper use and care of tools and materials

Preparation for dismissal.

Noon Intermission — If pupils remain at school during noon intermission, hands should be washed before lunch; teeth should be brushed after lunch; pupils sent out-of-doors to play whenever weather permits

AFTERNOON SESSION

Assembly[1] — Class discussions as memory and English expression exercises on current events, nature study, art appreciation, elementary science or the preceding chapters of a serial story read previously by one of the pupils to the class

	GROUP I (Lowest)	GROUP II (Low)	GROUP III (Intermediate)	GROUP IV (High)
	Teaching Period (Number facts)	**Correlated Seatwork**	**Correlated Seatwork**	**Correlated Seatwork**
	Adapt instruction to mental abilities.	Solve problems similar to seatwork for Group I but more advanced	Solve problems involving:	Solve problems similar to seatwork for Group III but more advanced
	Motivate the teaching of number facts through application to concrete teaching materials and situations, to plays and games, and to manual activities	Match number names, figures, and correct number of objects	Fundamental processes taught	Solve practical problems in simple units in relation to money, weights and measures, in household activities, in banking, and in travel (All exercises to be written in full only and Roman numerals used on clock dials and eighths to the hour. All exercises to be written and corrected later by teacher)
	Dramatize number facts in problem form	Solve simple problems in addition and subtraction, using concrete materials and telling answers.	Quantity and cost of materials used in manual activities.	
BLOCK III	Drill on number facts	Read and do exercises related to current unit of study.	Quantity and cost of materials used in miniature or model of unit of study	
	Proceed slowly with daily repetition and drill	Other similar exercises.	Practical buying and selling problems related to current unit.	
Number Facts[2]				
	Correlated Seatwork	**Teaching Period** (Number facts)		
	Sell numbers	Adapt instruction to the fundamental processes to abilities and needs.		
	Sell by unity	Motivate the teaching of number facts through application in concrete teaching materials, to manual activities, and to practical arithmetical problems related to the current unit of study.		
Through Concrete	Write numbers if competent	See other suggestions outlined for Group I		
	Arrange series of colored pegs, beads, sticks, blocks, etc	Check seatwork.		
	Arrange toy money as to denomination			
	Match numerals with objects.			
	Match numbers with pictures of objects.			
Application to and	Match dominoes			
	Count pictures of objects related to unit of study and write numbers.			
	Other similar exercises			
	(Check seatwork)			
			Teaching Period (Number facts)	
			Adapt instruction to the fundamental processes to needs and abilities.	
Dramatization of			See other suggestions outlined for Groups I and II	
			Correlated Seatwork	**Teaching Period** (Number facts)
Socializing Activities			Practical problems related to clock and calendar facts, to money, to weights and measures, to household expenses, to banking, and to travel (All exercises to be written by pupils and corrected later by teacher)	Adapt instruction to the fundamental processes to needs and abilities.
				Review number facts and abilities previously taught
				See other suggestions outlined for Groups I and II

· 00-2 10 — Recreational Activities — Initiative play. Class participating as a unit. Supervised play adapted to group differences, or free play if desirable. Out-of-doors when weather permits

BLOCK IV
2 10-3 10 Manual Activities
1. Socializing activities through group participation in constructing miniature or model of project
2. Arts and crafts. Woodwork, weaving, paper construction, clay modeling, metalcraft, leathercraft, household arts, or other crafts with attention to science and art appreciation in color and related to units of study.
3. School journeys and nature study trips
4. Proper use and care of tools and materials.

3:10-3 15 — Preparation for dismissal

EXPLANATORY NOTE

Social Hygiene and Classroom Duties

These activities preferably should precede the opening of the morning session. With this preparation, the work of the day will proceed more smoothly and with greater facility.

See page — for suggestions in regard to the form of classroom duties and classroom attendance.

Health Survey and Informal Period

The health survey need should be negligible if any good resulted. It is the most vital part of the day's proceedings. An informal survey is preferable to a formal health inspection in the usual mentally retarded class composed of pupils ranging chronologically from eight years upwards.

The informal period affords an opportunity for the pupils to discuss personal matters with the teacher, for reading helpful hand assignments, for assigning pupils for school tasks, and other preparations for the day.

3 *Assembly*

This should be a happy occasion, the influence of which should extend throughout the school day. Self-exposition through individual items of entertainment that brings personal gratification should be encouraged. Hide pursuits and hobby stories should be selected that are within the comprehension of the majority of the class. Songs should be correlated with the current unit of study wherever possible.

4 *Health Instruction*

This period presents an excellent opportunity for English expression in addition to the consideration of knowledge regarding good health habits and safe practices in school, at home, and on playgrounds and streets. While the teacher directs the discussion and asks leading questions, the major contribution should come from the pupils in the form of complete sentences. These discussions on health and safety should be related to the project or unit of study being developed.

5 *Oral Expression*

Reading lessons of the type of unit or the program are in reality exercises in oral and written expression as well as in reading, spelling, and penmanship. They result through the exchange of ideas by means of speaking to and hearing from others. Encourage pupils to express their grammatical mistakes in spelling and penmanship of their compositions. It is absolutely essential for the teacher to check carefully for accuracy the spelling and grammatical structure of each composition. The educational value of this procedure is not realized if the spelling and grammar are not correct. Errors should be initiated by the teacher and corrected by the pupil.

6 *Relaxation Period*

A relaxation period should be introduced in the belief that there is advantage in pupils in different activities. The length of the period should not be less than two or more than five minutes.

7 *Recreation*

[illegible] the reading lesson [illegible] unit of study. Usually [illegible] are adequate for a half hour [illegible] unit. Short periods may be given [illegible] the pupils [illegible]

(Concluded from inside front cover page)

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